Safety & Environmental Protection

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1. (1.7.2.1-1) After measuring the length to which a section of shoring should be cut, you should cut the shoring _____.

- (a) approximately 1/2 inch shorter than measured length to allow for the use of wedges
- (b) to the same length as the measured length
- (c) approximately 1/2 inch longer than measured length to allow for trimming
- (d) approximately 1/2 inch shorter per foot of shoring to allow wet expansion

If choice a is selected set score to 1.

2. (1.7.2.1-4) The wooden shoring shown in the illustration is bearing against the hatch coaming and is supporting a load in the direction indicated by the arrows. Which of the following statements is correct for the this condition? SF-0018

- (a) Shore "A" will support the greatest load.
- (b) Shore "A" will not slip under load.
- (c) Shore "B" will support the load without it cracking.
- (d) Shore "B" will crack at the pointed end.

If choice c is selected set score to 1.

3. (1.7.2.1-3) Wooden shoring is used in shipboard damage control to _____.

- (a) prevent fractures from spreading
- (b) support a damaged bulkhead in position
- (c) force a warped bulkhead back into its normal position
- (d) force a sprung bulkhead back into place

If choice b is selected set score to 1.

4. (1.7.2.1-2) Which of the methods shown in the illustration is the correct way to fit shoring? SF-0016

- (a) B
- (b) A
- (c) D
- (d) C

If choice b is selected set score to 1.

5. (1.7.2.1-5) After an emergency shoring installation has been completed, the _____.

- (a) shoring should be frequently inspected for looseness
- (b) damaged plating should be straightened by heating
- (c) timbers are nailed in place to prevent looseness
- (d) repair is completed and no further action is needed

If choice a is selected set score to 1.

6. (1.7.2.2-3) In a compartment that has been completely flooded with water, the greatest pressure will be exerted _____.

- o (a) at the vertical center of the bulkhead
- o (b) at a point that is one-third from the bottom of the bulkhead
- o (c) along the top of the bulkhead
- • (d) along the bottom of any bulkhead

If choice d is selected set score to 1.

7. (1.7.2.2-2) Progressive flooding in the engine room may be minimized by securing watertight boundaries and _____.

- • (a) pumping out flooded compartments
- o (b) transferring reserve feed water
- o (c) dumping fuel oil
- o (d) evacuating the engine room

If choice a is selected set score to 1.

8. (1.7.2.2-1) Your ship has run aground and it is necessary to determine whether or not a compartment has flooded. Therefore, you should _____.

- • (a) tap the bulkhead with a hammer to check for a water level
- o (b) feel the bulkhead to see if it is hot
- o (c) open the hatch dogs on the side away from the hinges
- o (d) open the watertight door and take a quick look

If choice a is selected set score to 1.

9. (1.7.2.3-1) Following a grounding, you can best determine that a SLACK fuel oil tank has been holed by _____.

- o (a) waiting for the vessel to list
- o (b) examining tank boundaries
- o (c) checking fuel oil strainers
- • (d) sounding the tank

If choice d is selected set score to 1.

10. (1.7.2.4-4) An acceptable method of temporarily sealing a crack formed in the hull of a vessel is to _____.

- o (a) shore up the crack with welded braces
- o (b) drill holes at each end
- o (c) tack weld a doubler plate over the crack
- • (d) apply a patch of sheet packing backed by a strong back or shoring

If choice d is selected set score to 1.

11. (1.7.2.4-2) It is generally not advisable to drive a wedge into a crack occurring in the hull because wedges _____.

- ○ (a) will work loose
- ○ (b) will splinter
- • (c) tend to open the crack
- ○ (d) will pull through the plating

If choice c is selected set score to 1.

12. (1.7.2.4-3) The lengthening of a crack formed in the shell plating of a ship may be prevented by _____.

- • (a) drilling a hole at each end of the crack
- ○ (b) chipping out and slot welding the entire crack
- ○ (c) cutting a square notch at each end of the crack
- ○ (d) welding brackets across both ends of the crack

If choice a is selected set score to 1.

13. (1.7.2.4-1) In an emergency, a hole in the hull below the waterline, not over three inches in diameter, can be temporarily sealed by _____.

- ○ (a) welding over a plate patch
- • (b) using a soft wooden plug
- ○ (c) stuffing a mattress in the hole
- ○ (d) rigging a collision mat

If choice b is selected set score to 1.

14. (1.7.2.4-5) A hole in the hull above the waterline may be temporarily patched with _____.

- ○ (a) blankets
- ○ (b) pillows
- ○ (c) mattresses
- • (d) All of the above.

If choice d is selected set score to 1.

15. (1.7.3.1.1-2) Before CPR is started on the victim, you should _____.

- ○ (a) make the victim comfortable
- • (b) establish an open airway
- ○ (c) treat any bleeding wounds
- ○ (d) insure the victim is conscious

If choice b is selected set score to 1.

16. (1.7.3.1.1-4) In order to initiate CPR on a drowning victim, _____.

- (a) start chest compressions before the victim is removed from the water
- (b) begin mouth-to-mouth ventilations
- (c) drain water from the lungs before ventilating
- (d) do not tilt the head back since it may cause vomiting

If choice b is selected set score to 1.

17. (1.7.3.1.1-5) The MOST important element in administering CPR is _____.

- (a) having the proper equipment for the process
- (b) starting the treatment quickly
- (c) administering of oxygen
- (d) treating for shock

If choice b is selected set score to 1.

18. (1.7.3.1.2-1) For a victim who is coughing and gagging, as a result of a partial obstruction of the airway by a foreign body, a potential rescuer should _____.

- (a) bend the victim over and give back blows
- (b) encourage the victim to continue coughing. If the victim is unable to expel the object, arrange for prompt transport to an appropriate medical facility
- (c) wait for the victim to become unconscious then give four back blows followed by four abdominal thrusts
- (d) immediately give four abdominal thrusts

If choice d is selected set score to 1.

19. (1.7.3.1.3-8) While you are fighting a fire in a smoke-filled compartment one of your shipmates falls sustaining a severe laceration and ceases breathing. Your FIRST response should be to _____.

- (a) remove him from the compartment
- (b) begin artificial respiration
- (c) control the bleeding
- (d) treat for shock

If choice a is selected set score to 1.

20. (1.7.3.1.3-4) In managing a situation involving multiple injuries, the rescuer must be able to _____.

- (a) accurately diagnose the ailment or injury
- (b) provide the necessary medication
- (c) prescribe treatment for the victim
- (d) rapidly evaluate the seriousness of obvious injuries

If choice d is selected set score to 1.

21. (1.7.3.1.3-1) When giving first aid, you should understand how to conduct primary and secondary surveys in addition to _____.

- (a) how to diagnose an illness from symptoms
- (b) how to set broken bones
- (c) the limits of your capabilities
- (d) which medications to prescribe

If choice c is selected set score to 1.

22. (1.7.3.1.3-5) After an injury, which of the following can be determined by examining the condition of a victim's pupils?

- (a) The degree of vision impairment.
- (b) Whether or not the victim's blood pressure is normal.
- (c) The degree of pain being suffered.
- (d) Whether or not the brain is functioning properly.

If choice d is selected set score to 1.

23. (1.7.3.1.3-10) You are making a round of the engine room and approaching the motor driven cargo pumps and discover a person laying at the foot of the ladder. What action should be taken?

- (a) Immediately enter the area to see if the person is conscious.
- (b) Leave the scene and continue on your watch rounds.
- (c) Send the QMED to the area and have him determine if the person appears conscious.
- (d) Promptly notify the deck watch officer.

If choice d is selected set score to 1.

24. (1.7.3.1.4-3) The rescuer can best provide an airtight seal during mouth-to-mouth resuscitation by pinching the victim's nostrils and _____.

- (a) holding the jaw down firmly
- (b) keeping the head elevated
- (c) cupping a hand around the patient's mouth
- (d) applying his mouth tightly over the victim's mouth

If choice d is selected set score to 1.

25. (1.7.3.1.4-4) When administering mouth to mouth rescue breathing to an adult, you should breathe at the rate of how many breaths per minute?

- (a) 8
- (b) 4
- (c) 20
- (d) 12

If choice d is selected set score to 1.

26. (1.7.3.1.4-1) Artificial respiration may be necessary in cases of _____.

- (a) drowning
- (b) poisoning
- (c) electrocution
- (d) All of the above

If choice d is selected set score to 1.

27. (1.7.3.1.4-2) If vomiting occurs during a resuscitation effort, the best immediate procedure to follow is _____.

- (a) ignore it and continue mouth-to-mouth ventilation
- (b) switch to mouth-to-mouth ventilation
- (c) pause for a moment until the patient appears quiet again, then resume mouth-to-mouth ventilation
- (d) turn the patient's body to the side, sweep out the mouth and resume CPR

If choice d is selected set score to 1.

28. (1.7.3.2-3) In all but the most severe cases, bleeding from a wound should be controlled by _____.

- (a) applying a tourniquet
- (b) cooling the wound with ice
- (c) applying direct pressure
- (d) submerging the wound in lukewarm water

If choice c is selected set score to 1.

29. (1.7.3.2-1) A tourniquet should be used to control bleeding only _____.

- (a) with puncture wounds
- (b) to prevent bleeding from minor wounds
- (c) when all other means have failed
- (d) when the victim is unconscious

If choice c is selected set score to 1.

30. (1.7.3.2-2) A person has suffered a laceration of the arm. Severe bleeding has been controlled by using a sterile dressing and direct pressure. Which of the following actions should be taken next?

- (a) Remove any small foreign matter and apply antiseptic.
- (b) Apply a pressure bandage over the dressing.
- (c) Administer fluids to assist the body in replacing the lost blood.
- (d) Apply a tourniquet to prevent the bleeding from restarting.

If choice b is selected set score to 1.

31. (1.7.3.2-5) Bleeding from a vein may be ordinarily controlled by _____.

- (a) heavy application of a disinfectant
- (b) pinching the wound closed
- (c) applying direct pressure to the wound
- (d) pouring ice water directly into the wound

If choice c is selected set score to 1.

32. (1.7.3.2-7) Antiseptics are used principally to _____.

- (a) reduce inflammation
- (b) increase blood circulation
- (c) prevent infection
- (d) promote healing

If choice c is selected set score to 1.

33. (1.7.3.3-8) If a patient has an electrical burn, you would check for breathing, pulse, and _____.

- (a) remove any dirt or charred skin from the burned area
- (b) apply alcohol to the burn area and wrap with clean cloth
- (c) locate the nearest water source and flood the burn with water for five minutes
- (d) look for a second burn, which may have been caused by the current leaving the body

If choice d is selected set score to 1.

34. (1.7.3.3-6) The most effective first aid treatment for chemical burns is to immediately _____.

- (a) apply an ice pack to the burned area
- (b) wrap the burn with sterile dressing
- (c) flood the affected area with water
- (d) apply ointment to burned area

If choice c is selected set score to 1.

35. (1.7.3.3-3) In treating a person for extensive first or second degree thermal burns it is important to prevent or reduce _____.

- (a) asphyxia
- (b) infection
- (c) disfigurement
- (d) pain

If choice d is selected set score to 1.

36. (1.7.3.3-7) Basic emergency care for an electrical burn is to _____.

- (a) brush away the charred skin and wrap the burned area
- (b) flood the burn with water for two minutes
- (c) apply ointment or spray to the burned area and wrap with a clean cloth
- (d) cover the burned area with a clean cloth and transport the patient to a medical facility

If choice d is selected set score to 1.

37. (1.7.3.4.1-1) If someone suffers a heart attack and has ceased breathing, you should _____.

- (a) administer oxygen
- (b) immediately start CPR
- (c) make the victim comfortable in a bunk
- (d) immediately give a stimulant, by force if necessary

If choice b is selected set score to 1.

38. (1.7.3.5-1) If a person gets battery acid in their eye while filling a battery, they should FIRST wash the eye with _____.

- (a) boric acid solution
- (b) baking soda solution
- (c) water
- (d) ammonia

If choice c is selected set score to 1.

39. (1.7.3.5-2) If a person gets something in his eye and you observe that it is not embedded, you can _____.

- (a) remove it with a piece of dry sterilized cotton rag
- (b) get him to rub his eye until the object is gone
- (c) remove it with a moist cotton-tipped applicator
- (d) remove it with a match or toothpick

If choice c is selected set score to 1.

40. (1.7.3.6-1) A crew member has suffered possible frostbite to the toes of both feet. You should _____.

- (a) warm the feet at room temperature
- (b) rub the feet to restore circulation
- (c) warm the feet with a heat lamp
- (d) immerse the feet in warm water

If choice d is selected set score to 1.

41. (1.7.3.7.1-1) Treatment of heat exhaustion should consist of _____.

- (a) placing patient in a tub of cold water
- (b) moving to a shaded area and laying down
- (c) bathing with rubbing alcohol
- (d) All the above

If choice b is selected set score to 1.

42. (1.7.3.7.2-1) Which of the following conditions is a symptom of heat stroke _____.

- (a) cold and moist skin, high body temperature
- (b) cold and dry skin, low body temperature
- (c) hot and moist skin, high body temperature
- (d) hot and dry skin, high body temperature

If choice d is selected set score to 1.

43. (1.7.3.8-1) Physical exertion on the part of a person who has fallen into cold water can _____.

- (a) be the best thing to try if there was no rescue in sight
- (b) increase the rate of heat loss from the body
- (c) not affect the heat loss from the body
- (d) increase survival time in the water

If choice b is selected set score to 1.

44. (1.7.3.8-2) The most effective warming treatment for a crew member suffering from hypothermia is _____.

- (a) running or jumping to create heat
- (b) lying in the sun
- (c) mouth-to-mouth resuscitation
- (d) a warm water bath

If choice d is selected set score to 1.

45. (1.7.3.9-1) Persons who have swallowed a non-petroleum based poison are given large quantities of warm, soapy water or warm salt water to _____.

- o (a) neutralize the poison in the blood
- o (b) increase the digestive process and eliminate the poison
- o (c) absorb the poison from the blood
- • (d) induce vomiting

If choice d is selected set score to 1.

46. (1.7.3.10-5) If there is no head injury, extreme physical discomfort or difficulty in breathing, a patient in shock should be placed in which of the positions listed?

- o (a) Arms above the head
- o (b) Head up and feet down
- • (c) Flat on back with feet raised 12 to 18 inches
- o (d) Flat on back with head and feet at the same level

If choice c is selected set score to 1.

47. (1.7.3.10-2) Which of the following is NOT a treatment for traumatic shock?

- o (a) Have the injured person lie down.
- o (b) Keep the patient warm, but not hot.
- o (c) Relieve the pain of the injury.
- • (d) Massage the arms and legs to restore circulation.

If choice d is selected set score to 1.

48. (1.7.3.10-6) Which of the following symptoms may be observed in a victim of cardiac arrest as a result of electric shock?

- o (a) weak pulse at wrist or neck
- • (b) respiration is weak or has stopped
- o (c) flushed face
- o (d) All of the above symptoms

If choice b is selected set score to 1.

49. (1.7.3.10-3) Which of the following conditions is a symptom of a person in shock?

- • (a) Cold and damp
- o (b) Warm and dry
- o (c) Cold and dry
- o (d) Warm and damp

If choice a is selected set score to 1.

50. (1.7.3.10-4) When treating a person for shock, you should wrap the victim in warm coverings to _____.

- (a) preserve present body heat
- (b) protect the person from injury during transportation
- (c) avoid self-inflicted wounds caused by spastic movement
- (d) decrease body heat

If choice a is selected set score to 1.

51. (1.7.3.10-1) In any major personal injury, first aid is to include the treatment of the injury and what additional treatment?

- (a) Removal of any foreign objects
- (b) Application of CPR
- (c) Treatment for traumatic shock
- (d) Administration of oxygen

If choice c is selected set score to 1.

52. (1.7.3.11-2) First aid treatment for small cuts and open wounds is to _____.

- (a) stop the bleeding, clean, medicate, and cover the wound
- (b) apply a hot towel to purge the wound, then medicate and cover it
- (c) apply an ice pack to the wound and cover it when the bleeding stops
- (d) lay the patient down and cover the wound when the bleeding stops

If choice a is selected set score to 1.

53. (1.7.3.11-1) A person reports to you with a fishhook in their thumb. The accepted procedure for removing it should be to _____.

- (a) cut the skin from around the hook
- (b) pull it out with pliers
- (c) have a surgeon remove it
- (d) push the barb through, cut it off, and then remove the hook

If choice d is selected set score to 1.

54. (1.7.3.11-3) A person reports to you with a fishhook in his thumb. To remove it you should _____.

- (a) pull it out with pliers
- (b) push the barb through, cut it off, then remove the hook
- (c) have a surgeon remove it
- (d) cut the skin from around the hook

If choice b is selected set score to 1.

55. (1.7.4.1.1-6) The bypass valve on a self-contained breathing apparatus (SCBA) bypasses _____.

- (a) the regulator in an emergency
- (b) oxygen to the atmosphere
- (c) the regenerator in an emergency
- (d) a breathing bag containing excessive pressure

If choice a is selected set score to 1.

56. (1.7.4.1.1-2) Which unit will provide excellent mobility to the wearer in an unsafe atmosphere and provide oxygen to sustain life?

- (a) A self-contained breathing apparatus
- (b) An ammonia gas mask
- (c) A fresh air breathing apparatus
- (d) All of the above

If choice a is selected set score to 1.

57. (1.7.4.1.1-3) Why should you wear a self-contained breathing apparatus before entering a closed compartment to fight a fire?

- (a) The fire produces smoke, which contains toxic gases that cause breathing difficulties and irritation of the respiratory tract.
- (b) The fire consumes oxygen which may lead to asphyxiation.
- (c) The fire produces carbon monoxide which causes an oxygen deficiency in the brain and body, leading quickly to death.
- (d) All of the above.

If choice d is selected set score to 1.

58. (1.7.4.1.1-5) You are about to enter a compartment to investigate a suspected smoldering fire. If you're not wearing an self-contained breathing apparatus, you should test the compartment's atmosphere to determine if there is/are _____.

- (a) a toxic atmosphere in the compartment
- (b) an explosive mixture in the compartment
- (c) sufficient oxygen to sustain human life
- (d) all of the above

If choice d is selected set score to 1.

59. (1.7.4.1.2-3) The equipment shown in the illustration is a _____. SF-0012

- (a) canister-type gas mask
- (b) fresh-air hose mask
- (c) demand-type breathing apparatus
- (d) cylinder-type air mask

If choice a is selected set score to 1.

60. (1.7.4.1.2-2) What is the maximum reliable shelf life of a filter gas mask canister if the seal is unbroken?

- o (a) 1 year from the date of manufacture
- o (b) 3 years from the date of manufacture
- o (c) 7 years from the date of manufacture
- • (d) 5 years from the date of manufacture

If choice d is selected set score to 1.

61. (1.7.4.1.2-1) Which of the following statements is true concerning canister-type gas masks?

- o (a) They are designed for use in a specific gas or atmosphere.
- o (b) There may be a time limit for use marked on the canister.
- o (c) They do not provide an independent oxygen supply.
- • (d) All of the above.

If choice d is selected set score to 1.

62. (1.7.4.1.3-1) Which of the following devices allows the user to remain in an oxygen deficient space for the longest period of time without interruption?

- • (a) Direct compressed air supply
- o (b) Demand-type oxygen breathing apparatus
- o (c) Pure oxygen breathing apparatus
- o (d) Canister-type gas mask

If choice a is selected set score to 1.

63. (1.7.4.1.3-2) Clean air standards, referred to as 'Grade D', apply to compressed air for use in _____.

- o (a) driving air powered plunger pumps
- o (b) high pressure fluid accumulators
- • (c) filling open circuit breathing systems
- o (d) bladder type accumulators

If choice c is selected set score to 1.

64. (1.7.4.4-1) The external flotation bladder on an immersion suit should be inflated _____.

- o (a) before you enter the water
- • (b) after you enter the water
- o (c) after one hour in the water
- o (d) after you notice that your suit is losing buoyancy

If choice b is selected set score to 1.

65. (1.7.4.4-2) If for any reason it is necessary to abandon ship while far at sea, it is important for the crew members to _____.

- (a) separate from each other as this will increase the chances of being rescued
- (b) get away from the area because sharks will be attracted to the vessel
- (c) immediately head for the nearest land
- (d) remain together in the area because rescuers will start searching at the vessel's last known position

If choice d is selected set score to 1.

66. (1.7.4.5-1) Which of the following statements is TRUE concerning lifejackets?

- (a) Buoyant vests may be substituted for lifejackets.
- (b) Lifejackets are designed to turn an unconscious person's face clear of the water.
- (c) Lifejackets must always be worn with the same side facing outwards to float properly.
- (d) Lightly stained or faded lifejackets will fail in the water and should not be used.

If choice b is selected set score to 1.

67. (1.7.4.5-2) Kapok lifejackets require proper care and should NOT be _____.

- (a) stowed near open flame or where smoking is permitted
- (b) used as seats, pillows, or foot rests
- (c) left on open decks
- (d) all of the above

If choice d is selected set score to 1.

68. (1.7.4.6-1) The sea painter on a rescue boat should be led _____.

- (a) forward and outside of all obstructions
- (b) forward and inside of all obstructions
- (c) up and down from the main deck
- (d) to the foremost point on the vessel

If choice a is selected set score to 1.

69. (1.7.4.7-1) Which of the following conditions represents the appropriate time for setting off distress flares and rockets?

- (a) Only when there is a chance of them being seen by rescue vessels.
- (b) At half-hour intervals.
- (c) At one hour intervals.
- (d) Immediately upon abandoning the vessel.

If choice a is selected set score to 1.

70. (1.7.4.8.1-5) Immediately after abandoning a vessel, lookouts should be posted aboard life rafts to look for _____.

- (a) survivors in the water
- (b) food and water
- (c) land
- (d) bad weather

If choice a is selected set score to 1.

71. (1.7.4.8.1-10) When launching an inflatable life raft, you should make sure that the operating cord is _____.

- (a) fastened to some substantial part of the vessel
- (b) not fastened to anything
- (c) secured to the hydrostatic release
- (d) fastened to the raft container

If choice a is selected set score to 1.

72. (1.7.4.8.1-11) Puncture leaks in the lower tubes, or bottom of an inflatable life raft should first be stopped by using _____.

- (a) sealing clamps
- (b) repair tape
- (c) a tube patch
- (d) sail twine and vulcanizing kit

If choice a is selected set score to 1.

73. (1.7.4.8.1-13) Most lifeboats are equipped with _____.

- (a) unbalanced rudders
- (b) balanced rudders
- (c) contraguide rudders
- (d) straight rudders

If choice a is selected set score to 1.

74. (1.7.4.8.1-12) When using the rainwater collection tubes on a life raft, the FIRST collection should be _____.

- (a) passed around so all can drink
- (b) poured overboard because of salt washed off the canopy
- (c) saved to be used at a later time
- (d) used to boil food

If choice b is selected set score to 1.

75. (1.7.4.8.1-1) If a life raft should capsize _____.

- (a) climb onto the bottom
- (b) swim away from the raft
- (c) right the raft using the righting straps
- (d) inflate the righting bag

If choice c is selected set score to 1.

76. (1.7.4.8.1-8) While adrift in an inflatable life raft in hot, tropical weather _____.

- (a) the canopy should be deflated so that it will not block cooling breezes
- (b) the pressure valve may be periodically opened to prevent excessive air pressure
- (c) deflating the floor panels may help to cool personnel
- (d) the entrance curtains should never be opened

If choice c is selected set score to 1.

77. (1.7.4.8.1-2) The purpose of the four water pockets, located on the underside at each corner of the raft, is to _____.

- (a) stow rainwater; these four spaces will not take up valuable space
- (b) act as stabilizers by filling with sea water as soon as raft is inflated and in an upright position
- (c) hold the freshwater required by regulation to be provided in the raft when packed
- (d) none of the above

If choice b is selected set score to 1.

78. (1.7.4.8.1-6) The most important reason for taking anti-seasickness pills as soon as possible after entering a life raft is to _____.

- (a) assist in sleeping
- (b) reduce appetite by decreasing nausea
- (c) prevent loss of body moisture by vomiting
- (d) prevent impaired judgment due to motion-induced deliriousness

If choice c is selected set score to 1.

79. (1.7.4.8.1-7) In order to retrieve an inflatable life raft and place it on deck, you should heave on the _____.

- (a) lifelines
- (b) righting strap
- (c) sea anchor
- (d) towing bridle

If choice d is selected set score to 1.

80. (1.7.4.8.1-9) The air spaces in the floor of an inflatable raft will provide protection against _____.

- (a) warm water temperatures
- (b) cold water temperatures
- (c) tears in the outside skin of bottom of the raft
- (d) all of the above

If choice d is selected set score to 1.

81. (1.7.4.8.1-3) The canopy of your life raft should _____.

- (a) go into place as the raft is inflated
- (b) be put up after everyone is aboard
- (c) be put up only in severe weather
- (d) be used as a sail if the wind is blowing

If choice a is selected set score to 1.

82. (1.7.4.8.1-4) Using a sea anchor when in a life raft will _____.

- (a) reduce the drift rate of the life raft
- (b) keep the life raft from turning over
- (c) aid in recovering the life raft
- (d) increase your visibility

If choice a is selected set score to 1.

83. (1.7.4.8.1-14) You have abandoned ship and are in charge of a life raft. How much water per day should you permit each occupant to drink after the first 24 hours?

- (a) 1 can
- (b) 1 pint
- (c) 1 quart
- (d) 1 gallon

If choice b is selected set score to 1.

84. (1.7.4.8.2-4) All personnel should be familiar with the lifeboats _____.

- (a) boarding and operating procedures
- (b) maintenance schedule
- (c) navigational systems
- (d) fuel consumption rates

If choice a is selected set score to 1.

85. (1.7.4.8.2-1) In the illustration shown, the sea painter is identified as item number _____. SF-0043

- (a) 3
- (b) 6
- (c) 7
- (d) 9

If choice c is selected set score to 1.

86. (1.7.4.8.2-6) Why is an upper limit switch used when raising the lifeboat?

- (a) To prevent the davits from pulling up against the stops.
- (b) To assist in cranking in the lifeboat.
- (c) To keep the tricing lines from releasing or getting tangled.
- (d) To stop the lifeboat from being lowered.

If choice a is selected set score to 1.

87. (1.7.4.8.2-5) The hand brake of a lifeboat winch is _____.

- (a) manually disengaged when hoisting a boat
- (b) applied by dropping the counterweighted lever
- (c) controlled by the centrifugal brake mechanism
- (d) automatically engaged if lowering speed is excessive

If choice b is selected set score to 1.

88. (1.7.4.8.2-9) In order for the automatic lifeboat drain to operate properly _____.

- (a) the cap should be removed to drain the boat when it is waterborne
- (b) the cage must be free of rubbish or the ball may not seat properly
- (c) there is an automatic ball check located in a siphon tube
- (d) the small lever to release the rubber ball float must be turned counterclockwise

If choice b is selected set score to 1.

89. (1.7.4.8.2-10) Which of the lifeboat parts listed must be painted bright red?

- (a) Hatches
- (b) Releasing gear lever
- (c) Boat hooks
- (d) Compass

If choice b is selected set score to 1.

90. (1.7.4.8.2-2) When abandoning ship, after launching the motor lifeboat you should _____.

- (a) plot course for nearest land
- (b) go only with the direction of the sea
- (c) stay in the immediate area
- (d) go one direction until fuel runs out

If choice c is selected set score to 1.

91. (1.7.4.8.2-3) When lowering lifeboats as the vessel is pitching in heavy seas, a good practice is to rig frapping lines _____.

- (a) on only the forward falls
- (b) on only the after falls
- (c) fore and aft with a lead of about 45° to the boat
- (d) from the falls to the tricing gear

If choice c is selected set score to 1.

92. (1.7.4.8.2-7) The purpose of the wire stretched between the lifeboat davit heads is to _____.

- (a) keep the movement of the davits at the same speed
- (b) keep the davits from slipping when they are in the stowed position
- (c) prevent vibration during lowering of the boat
- (d) support the manropes

If choice d is selected set score to 1.

93. (1.7.4.8.2-8) When a helicopter is lifting personnel from an enclosed lifeboat, the other individuals in the boat should _____.

- (a) enter the water in case the person being lifted slips from the sling
- (b) stand on the outside of the boat to assist the person being lifted
- (c) remove their lifejackets to prepare for their transfer to the helicopter
- (d) remain seated inside to provide body weight for stability

If choice d is selected set score to 1.

94. (1.7.4.8.2-11) Your vessel is equipped with totally enclosed lifeboats. Which of the following statements is correct should the boat be enveloped in flames?

- (a) The ventilators will automatically close by the action of fusible links.
- (b) The diesel engine will take its air supply from outside the lifeboat to prevent asphyxiation of the crew.
- (c) A water spay system to cool the outside of the boat is operated by a high-volume manual pump.
- (d) A pressurized air tank will provide approximately ten minutes of air for the survivors and the diesel engine.

If choice d is selected set score to 1.

95. (1.7.4.8.3-1) In heavy seas the helmsman should steer the survival craft _____.

- (a) into the seas
- (b) broadside to the seas
- (c) in the same direction as the seas
- (d) in a series of figure-eights

If choice a is selected set score to 1.

96. (1.7.4.8.3-2) A self-righting survival craft will return to an upright position provided that all personnel _____.

- (a) are seated with seatbelts on and doors shut
- (b) are seated with seatbelts on and doors open
- (c) are to shift to one side to right it
- (d) escape from the craft

If choice a is selected set score to 1.

97. (1.7.4.8.3-3) When the survival craft is supplied with bottles of compressed air, they are used for _____.

- (a) personnel air supply
- (b) additional flotation
- (c) priming the sprinkler system
- (d) filling the self-righting bags

If choice a is selected set score to 1.

98. (1.7.4.8.3-8) While retrieving the survival craft, the engine should be stopped _____.

- (a) when the craft clears the water
- (b) when the cable has been attached
- (c) on approach to the platform
- (d) at the embarkation

If choice a is selected set score to 1.

99. (1.7.4.3.8-9) Using a sea anchor with the survival craft will _____.

- (a) reduce your drift rate
- (b) keep the survival craft from turning over
- (c) aid in recovering the survival craft
- (d) increase your visibility

If choice a is selected set score to 1.

100. (1.7.4.8.3-6) To activate an air regeneration canister on a survival craft, you _____.

- (a) put it into an container of water
- (b) tear off the tabs on the canister
- (c) turn it upside down
- (d) push 'on' button

If choice b is selected set score to 1.

101. (1.7.4.8.3-11) With the sprinkler system and air system on, and all hatches shut, the survival craft will be protected from _____.

- (a) a nuclear environment
- (b) a fire and toxic environment
- (c) a hurricane
- (d) a drop greater than ten feet

If choice b is selected set score to 1.

102. (1.7.4.8.3-5) When inspecting a survival craft, you should check to make sure that the _____.

- (a) sea anchor is deployed
- (b) hydraulic starting system has been drained
- (c) hydraulic pressure is within the specified range
- (d) steering controls are locked

If choice c is selected set score to 1.

103. (1.7.4.8.3-13) When collecting condensation for drinking water, _____.

- (a) a sponge used to mop up and store condensation must be kept salt free
- (b) only condensation on the bottom of the canopy should be collected
- (c) it should be strained through a finely woven cloth
- (d) chlorine tablets should be used to make it drinkable

If choice a is selected set score to 1.

104. (1.7.4.8.3-14) Provided every effort is used to preserve body moisture content by avoiding perspiration, how long is it normally possible to survive in a survival craft without stored quantities of water?

- (a) Up to 3 days
- (b) Up to 14 days
- (c) Up to 25 days
- (d) Up to 35 days

If choice b is selected set score to 1.

105. (1.7.4.8.3-7) When a rescue vessel approaches a survival craft in heavy seas, the person in charge of the survival craft should _____.

- (a) tie up to the rescue vessel
- (b) transfer only those personnel who are not seasick
- (c) wait for calmer weather before transferring personnel
- (d) transfer all personnel immediately

If choice c is selected set score to 1.

106. (1.7.4.8.3-10) The survival craft engine is fueled with _____.

- (a) kerosene
- (b) unleaded gasoline
- (c) diesel oil
- (d) liquefied gas

If choice c is selected set score to 1.

107. (1.7.4.8.3-4) An 'on-load' release system on a survival craft means the cable can be released _____.

- (a) only when the load is taken off the cable
- (b) only there is a load on the cable
- (c) only when activated by the controls at the lowering station
- (d) at any time

If choice d is selected set score to 1.

108. (1.7.4.8.3-12) Who is responsible for lowering the survival craft?

- (a) Roustabout
- (b) First man aboard
- (c) Last man aboard
- (d) Helmsman

If choice d is selected set score to 1.

109. (1.7.4.8.4-1) Seawater may be used for drinking water _____.

- (a) at a maximum rate of two ounces per day
- (b) after mixing with an equal quantity of fresh water
- (c) if gather during or immediately after a hard rain
- (d) under no circumstance

If choice d is selected set score to 1.

110. (1.7.5.1-6) During fueling operations oil is detected in the water adjacent to your vessel. If however, it is determined to be from some source other than your vessel, you should _____.

- (a) secure operations until the exact type of oil is determined
- (b) make an entry in the oil record book to that effect
- (c) notify the Coast Guard
- (d) All of the above

If choice c is selected set score to 1.

111. (1.7.5.1-4) When you have completed bunkering operations, the hoses should be _____.

- (a) drained into drip pans or tanks
- (b) stowed with their ends open for venting
- (c) steam cleaned and flushed with hot water
- (d) blown down with inert gas

If choice a is selected set score to 1.

112. (1.7.5.1-9) The most critical part of the bunkering operations, which can result in an oil spill, is when the _____.

- (a) tanks are being topped off
- (b) pumping operation is first started
- (c) system is being lined up
- (d) hose joints are made up

If choice a is selected set score to 1.

113. (1.7.5.1-12) When the scuppers are plugged and an oil spill occurs on deck, you should _____.

- (a) remove plugs from scuppers and wash fuel overboard with water
- (b) use absorbent material, such as sawdust, to clean up the spill
- (c) remove plugs from scuppers and wash the fuel overboard with a solvent
- (d) remove plugs from scuppers to allow the spill to run overboard and wipe the area dry with rags

If choice b is selected set score to 1.

114. (1.7.5.1-3) Which of the precautions listed should be observed when taking on diesel fuel?

- (a) Display a black triangle during daylight hours.
- (b) Secure all lighting to the main deck.
- (c) Provide a portable fan to blow away fumes.
- (d) Prohibit smoking in the area.

If choice d is selected set score to 1.

115. (1.7.5.2-2) The most common type of containment device for spilled oil on the water is the use of _____.

- (a) chemical dispersants
- (b) straw
- (c) booms
- (d) skimmers

If choice c is selected set score to 1.

116. (1.7.5.2-3) In cleaning up an oil spill, the use of straw or reclaimed paper fibers would be an example of which type of oil removal?

- (a) Mechanical removal
- (b) Chemical agent removal
- (c) Absorbent removal
- (d) None of the above

If choice c is selected set score to 1.

117. (1.7.5.2-4) While loading bulk oil, you notice oil on the water near the barge. Which of the following actions should you carry out FIRST?

- (a) Notify the Coast Guard
- (b) Stop loading
- (c) Notify terminal superintendent
- (d) Search the vessel for leaks

If choice b is selected set score to 1.

118. (1.7.5.2-1) Small oil spills on deck can be prevented from contaminating any waters by _____.

- (a) regularly emptying all drip pans
- (b) plugging all scuppers and drains
- (c) placing floating booms around the ship
- (d) thoroughly draining all bunkering hoses

If choice b is selected set score to 1.

119. (1.7.5.3-1) Where will you find the procedures for the reporting of oil discharge into the water?

- (a) The vessel's Certificate of Inspection
- (b) The vessel's Oil Transfer Procedures
- (c) The vessel's Oil Record Book
- (d) The vessel's International Oil Pollution Prevention Certificate

If choice b is selected set score to 1.

120. (1.7.5.3-2) During oil transfer operations, who would be responsible to guarantee that the posted transfer procedures are being followed?

- (a) The designated person in charge
- (b) The senior able seaman
- (c) The oiler
- (d) The tankerman

If choice a is selected set score to 1.

121. (1.7.5.4-2) The amount of garbage disposed must be entered into the records maintained by each ship and stated in _____.

- (a) barrels, measured in 55 gallon drums
- (b) cubic meters
- (c) weight in either kilogram or pounds
- (d) cubic yards convertible to long tons

If choice b is selected set score to 1.

122. (1.7.5.4-1) Which of the following statements is true concerning the overboard discharge of vessel sewage at sea? -

- (a) The vessel may discharge sewage into the sea, from an approved system which is not comminuted or disinfected, only if the vessel is more than 12 nautical miles from the nearest land.
- (b) The vessel must have an approved sewage plant.
- (c) The vessel may discharge disinfected and comminuted sewage into the sea, from an approved system, only if the vessel is more than three nautical miles from the nearest land.
- (d) All of the above

If choice d is selected set score to 1.

123. (1.7.5.5-1) To prevent oil from escaping into the sea when ballasting through the cargo piping system, you should FIRST _____.

- ○ (a) open sluice valves, then start the cargo pump
- • (b) start the cargo pump, then open sea suction valves
- ○ (c) open block valves, then start the cargo pump
- ○ (d) open sea suction valves, then start the cargo pump

If choice b is selected set score to 1.

124. (1.7.5.5-2) Water ballast placed in a tank that has been crude oil washed, but not water rinsed, shall be regarded as _____.

- ○ (a) segregated ballast
- • (b) dirty ballast
- ○ (c) crude oil
- ○ (d) clean ballast

If choice b is selected set score to 1.

125. (1.7.6.1-1) When required to work in an area where explosive gases may accumulate, you should use hand tools which are _____. -

- • (a) nonferrous
- ○ (b) high carbon steel
- ○ (c) fixed with a ferrous cover
- ○ (d) approved by the Coast Guard

If choice a is selected set score to 1.

126. (1.7.6.1-2) Paints and solvents used aboard a vessel should be _____.

- ○ (a) stowed safely at the work site until work is completed
- • (b) returned to the paint locker after each use
- ○ (c) drained into a common container after each use
- ○ (d) covered with a fine mesh screen to protect from ignition sources

If choice b is selected set score to 1.

127. (1.7.6.1-3) Which of the following procedures reduces the possibility of an interior ventilation duct fire from rapidly spreading?

- ○ (a) Keeping the duct exterior clean.
- ○ (b) Having a portable CO2 ready at each duct opening.
- ○ (c) Having a fire hose charged at each duct opening.
- • (d) Keeping the duct interior clean.

If choice d is selected set score to 1.

128. (1.7.6.1-4) When welding or burning aboard a vessel, you must be certain that the space _____.

- (a) contains no explosive fumes
- (b) has no oil or flammable material in the area
- (c) is properly vented
- (d) all of the above

If choice d is selected set score to 1.

129. (1.7.6.1-5) A fire is considered 'under control' when _____.

- (a) the fixed systems are activated
- (b) all firefighting equipment is at the scene
- (c) the fire is contained and no longer spreading
- (d) all hands are at their fire stations

If choice c is selected set score to 1.

130. (1.7.6.3-1) The Muster List ("Station Bill") shows each crew lifeboat station, their duties during abandonment, basic instructions, and _____.

- (a) work schedule
- (b) the time each weekly drill will be held
- (c) all emergency signals
- (d) instructions for lowering the survival capsule

If choice c is selected set score to 1.

131. (1.7.6.5-1) The component shown in the illustration would be installed in which of the following types of fire detection systems? SF-0004

- (a) Fixed temperature
- (b) Line type pneumatic
- (c) Combined fixed temperature and rate-of-rise
- (d) Rate-of-rise

If choice a is selected set score to 1.

132. (1.7.6.5-2) In a typical automatic fire alarm system, which of the listed actions will cause an indication of a fire to be given in the annunciator cabinet?

- (a) The fire alarm test push-button is operated.
- (b) A rise in temperature activating a heat detector.
- (c) A manual fire alarm box is activated.
- (d) All of the above.

If choice d is selected set score to 1.

133. (1.7.6.5-3) Fire detecting systems on merchant vessels may be arranged to sense _____.

- o (a) ionized particles
- o (b) smoke
- o (c) rate of temperature rise
- • (d) all of the above

If choice d is selected set score to 1.

134. (1.7.7.1.1-10) A hand portable CO2 fire extinguisher is effective on burning oil only _____.

- o (a) if applied in connection with foam
- • (b) if applied promptly
- o (c) to prevent rekindling
- o (d) if attempts to extinguish the fire with low velocity fog have failed

If choice b is selected set score to 1.

135. (1.7.7.1.1-9) You have just extinguished an oil fire on the floor plates of the engine room with a 15 pound CO2 extinguisher. Which of the listed dangers should you now be preparing to handle?

- • (a) Reflashing of the fire.
- o (b) Sudden stoppage of the main engine.
- o (c) Complete lack of oxygen in the engine room.
- o (d) Chemical reaction of the CO2 and oil forming carbonic acid.

If choice a is selected set score to 1.

136. (1.7.7.1.1-8) If a fire broke out in an automation console, you would first secure the power and then proceed to use which of the listed hand portable fire extinguishers?

- • (a) CO2
- o (b) Soda acid
- o (c) Foam
- o (d) Dry chemical

If choice a is selected set score to 1.

137. (1.7.7.1.1-7) A squeeze-grip type carbon dioxide portable fire extinguisher has been partially discharged. It should be _____.

- o (a) replaced in its proper location if weight loss is no more than 25%
- • (b) labeled empty and recharged as soon as possible
- o (c) replaced in its proper location regardless of weight
- o (d) replaced in its proper location if weight loss is no more than 15%

If choice b is selected set score to 1.

138. (1.7.7.1.1-6) Annual servicing of a hand portable CO2 fire extinguisher includes _____.

- (a) hydrostatic testing of the cylinder
- (b) weighing the cylinder and recharging if weight loss exceeds 10% of the weight of the charge
- (c) inspecting the pressure gauge to ensure the needle is within operating range
- (d) discharging, cleaning inside, and recharging

If choice b is selected set score to 1.

139. (1.7.7.1.1-5) To operate a carbon dioxide extinguisher having the type of head shown in the illustration, you would _____. SF-0008

- (a) pull pin, open valve, and pull up on release lever
- (b) pull pin and open valve
- (c) open valve, pull pin, and pull up on release lever
- (d) open valve and pull pin

If choice b is selected set score to 1.

140. (1.7.7.1.1-16) Which of the listed methods is the most effective to fight a fire on the open deck of a vessel if using a dry chemical type fire extinguisher?

- (a) Move the discharge stream back and forth in a rapid sweeping motion.
- (b) Approach the fire from the windward side.
- (c) Direct the extinguisher discharge at the base of the fire.
- (d) All of the above.

If choice d is selected set score to 1.

141. (1.7.7.1.1-15) When fighting a fire with a portable dry chemical extinguisher you should always _____.

- (a) bounce the chemical onto the fire from adjacent structural members
- (b) attack the fire from the leeward side
- (c) spray the chemical across the tops of the flames
- (d) direct the stream of chemical toward the base of the fire

If choice d is selected set score to 1.

142. (1.7.7.1.1-14) When fighting an oil or gasoline fire, which of the listed fire extinguishing agents should NEVER be sprayed directly into the fire?

- (a) Dry chemical
- (b) Steam smothering
- (c) Low velocity fog
- (d) High velocity fog

If choice a is selected set score to 1.

143. (1.7.7.1.1-13) You are fighting a class "B" fire with a portable dry chemical extinguisher. The discharge should be directed _____.

- ○ (a) to bank off a bulkhead onto the fire
- • (b) at the seat of the fire, starting near the edge
- ○ (c) at the main body of the fire
- ○ (d) over the top of the fire

If choice b is selected set score to 1.

144. (1.7.7.1.2-1) The fire extinguishing equipment shown in the illustration is a large _____. SF-0009

- ○ (a) CO2 hose reel system
- • (b) dry chemical hose reel system
- ○ (c) Halon 1301 hose reel system
- ○ (d) light water hose reel system

If choice b is selected set score to 1.

145. (1.7.7.2.1-1) The fire extinguishing agent dispensed by the unit shown in the illustration is produced by _____. SF-0020

- ○ (a) educting air through "D" and mixing it with water in chamber "E"
- • (b) educting mechanical foam through "D" and mixing it with water and air in chamber "E"
- ○ (c) educting chemical foam through "D" and mixing it with water in chamber "E"
- ○ (d) educting air through "C", mechanical foam through "D", and mixing them with water in chamber "E"

If choice b is selected set score to 1.

146. (1.7.7.3.1-2) If the threads and gasket of a fire hose coupling are in good condition, the minimum mechanical advantage necessary for making a watertight connection to another hose coupling, can be developed with _____.

- • (a) your hands
- ○ (b) a hose wrench
- ○ (c) a coupling wrench
- ○ (d) a monkey wrench

If choice a is selected set score to 1.

147. (1.7.7.3.1-6) When the cotton cover of a fire hose becomes oily or greasy, it should be washed with a solution of mild soapy freshwater and _____.

- ○ (a) paint thinner
- • (b) a soft-bristled brush
- ○ (c) a wire brush
- ○ (d) cornstarch

If choice b is selected set score to 1.

148. (1.7.7.3.1-4) To properly maintain fire hoses, you should _____.

- (a) keep exterior linings damp by periodic wash downs
- (b) keep them partially filled with fresh water
- (c) keep them rolled tightly in the rack with female coupling protected
- (d) thoroughly drain them after each use

If choice d is selected set score to 1.

149. (1.7.7.3.1-5) If a fire hose is left unattended and under pressure with the nozzle shut off, the fire hose will _____.

- (a) become elongated by 125%
- (b) burst under pressure
- (c) remain motionless
- (d) lash about violently

If choice c is selected set score to 1.

150. (1.7.7.3.1-8) There is always a lower water pressure at the fire hose outlet than is found at the discharge of the pump. Which of the following reasons is the common cause of this loss in pressure?

- (a) Friction in the piping and valves
- (b) Leaky pump suction valve
- (c) Wear in the hydrant
- (d) Leaky pilot valve

If choice a is selected set score to 1.

151. (1.7.7.3.1-3) Fire hoses located at protected fire stations must always be _____.

- (a) capped on the ends for protection
- (b) supplied with a smooth bore nozzle
- (c) connected to the fire hydrant
- (d) open to the air to prevent rot

If choice c is selected set score to 1.

152. (1.7.7.3.1-1) Properly stowed fire hose is either faked or rolled into a rack with the _____.

- (a) male end attached to the adjacent fire hydrant
- (b) male and female ends connected together to prevent damage
- (c) female end available to be quickly connected to the hydrant
- (d) nozzle end arranged to be easily run out to the fire

If choice d is selected set score to 1.

153. (1.7.7.3.1-7) Which of the following statements is FALSE concerning the proper procedure in handling a fire hose? -

- (a) Backup hose man should be positioned wherever the hose makes a significant turn.
- (b) A 2-1/2 inch hose should be deployed with a minimum of a nozzle man and two horsemen.
- (c) Hose nozzle thrust increases with an increase in hose pressure.
- (d) The fire hose should be partially charged before deploying the hose from the hydrant.

If choice d is selected set score to 1.

154. (1.7.7.3.3-2) The all-purpose, or combination nozzle is capable by itself of producing a solid stream of water _____.

- (a) only
- (b) and low velocity water fog
- (c) and high and low velocity water fog
- (d) and high velocity water fog

If choice d is selected set score to 1.

155. (1.7.7.3.3-3) A person manning a fire hose under pressure with an all-purpose nozzle attached should be aware that the nozzle is most difficult to control when the handle position is changed from _____.

- (a) low velocity to high velocity fog
- (b) solid stream to fog
- (c) fog to shut
- (d) shut to solid stream

If choice d is selected set score to 1.

156. (1.7.7.3.3-4) The physical difference of the water spray patterns developed by the high velocity tip and low velocity applicator is due to _____.

- (a) the type of fire being fought
- (b) a difference in water pressure
- (c) the method of breaking up the water stream
- (d) the capacity of the fire pump

If choice c is selected set score to 1.

157. (1.7.7.3.3-1) A low velocity fog applicator is held in an all-purpose nozzle by a bayonet joint. The applicator is prevented from rotating in the joint by _____.

- (a) a spring-loaded catch
- (b) a locknut
- (c) a keeper screw
- (d) water pressure

If choice a is selected set score to 1.

158. (1.7.7.3.3-5) Which of the following statements is correct regarding the fog applicators used in conjunction with the combination nozzle?

- (a) On container ships, an applicator termed a bayonet or piercing type utilizes a sharp tip for cutting and penetrating the metal skin of a container.
- (b) In machinery spaces, the applicators should be 10 to 12 feet in length to insure all portions of the bilge can be effectively reached.
- (c) All cargo and miscellaneous vessels must be equipped with high velocity fog applicators for use with the required combination nozzle at each station.
- (d) All of the above.

If choice a is selected set score to 1.

159. (1.7.7.3.3-8) An extinguishing agent which effectively cools dilutes combustible vapors and provides a heat and smoke screen is _____.

- (a) dry chemical
- (b) water fog
- (c) carbon dioxide
- (d) Halon 1301

If choice b is selected set score to 1.

160. (1.7.7.3.3-6) Low velocity water fog is used in firefighting as a _____.

- (a) smothering agent
- (b) barrier against radiant heat
- (c) cooling agent
- (d) all of the above

If choice d is selected set score to 1.

161. (1.7.7.3.3-7) Water applied as a 'fog' can be more effective than water applied as a 'solid stream', because _____.

- (a) a given amount of water can absorb more heat when it is in the form of fog
- (b) it reduces the total amount of water that must be pumped into the ship to fight a given fire
- (c) it does not have to hit the seat of fire to be effective
- (d) of all of the above

If choice d is selected set score to 1.

162. (1.7.7.4.1-5) When a ship's low-pressure CO2 fixed fire extinguishing system is activated from a remote location, what determines the quantity of CO2 that will be released into the selected compartment?

- (a) The discharge of CO2 will continue until the temperature of the space returns to ambient conditions.
- (b) The number of discharge nozzles in the space will determine the quantity released.
- (c) A timer mechanism controls the discharge valve and is preset for the space being activated.
- (d) The CO2 tank is divided into separate sections designated for each protected space.

If choice c is selected set score to 1.

163. (1.7.7.4.1-6) If the alarm provided in the fixed CO2 system sounds in the engine room, you should _____.

- (a) immediately assist the fixed system by discharging all portable units as well
- (b) leave the space immediately
- (c) start the fire pump
- (d) make certain that the CO2 starts flowing into the space

If choice b is selected set score to 1.

164. (1.7.7.4.1-2) After extinguishing a paint locker fire using the fixed CO2 system, the next immediate action is for the space to be _____.

- (a) opened and burned material removed
- (b) left closed with ventilation off until all boundaries are cool
- (c) checked for the proper oxygen level
- (d) opened and doused with water to prevent reflash

If choice b is selected set score to 1.

165. (1.7.7.4.1-3) When fighting a machinery space fire, you should operate a fixed CO2 system by opening the control valve to the space protected and _____.

- (a) visually checking to see that CO2 is discharging through the piping
- (b) operating a separate control to release CO2
- (c) modulating the proper amount of CO2 from individual bottles
- (d) listening for the sound of the warning siren

If choice b is selected set score to 1.

166. (1.7.7.4.1-4) What would be the most probable cause for a high pressure alarm to be activated in a Low Pressure CO2 fixed fire extinguishing system?

- (a) An excessive amount of insulation has been installed on the tank and piping.
- (b) An air leak has developed in the tank.
- (c) The tank cooling system has malfunctioned.
- (d) The pilot cylinder discharge valve is leaking.

If choice c is selected set score to 1.

167. (1.7.7.4.1-7) Why is it essential to introduce CO2 from a fixed fire extinguishing system, into a large engine room, as quickly as possible?

- (a) The fire may warp the CO2 piping.
- (b) To keep the fire from spreading through the bulkheads.
- (c) Carbon dioxide takes a long time to disperse to all portions of a space.
- (d) Updraft from the fire tends to carry the CO2 away.

If choice d is selected set score to 1.

168. (1.7.7.4.1-8) When reentering an engine room that has been flooded with CO2, the investigating team should initially _____.

- (a) attempt to operate propulsion machinery
- (b) enter from the lowest possible level
- (c) leave the access door partially open
- (d) enter from the highest level with breathing apparatus

If choice d is selected set score to 1.

169. (1.7.7.4.1-1) The source of power for the CO2 discharge alarm siren is obtained from _____.

- (a) the emergency power and lighting bus
- (b) the flow of CO2 under pressure
- (c) the general alarm 24 volt DC bus
- (d) all of the above

If choice b is selected set score to 1.

170. (1.7.7.4.2-1) The primary function of an automatic sprinkler system is to _____.

- (a) instantaneously extinguish the fire which triggered it
- (b) limit the spread of the fire and control the amount of heat produced
- (c) protect people in the areas which have had sprinkler heads installed
- (d) alert the crew to the fire

If choice b is selected set score to 1.

171. (1.7.7.4.2-5) Which of the following components provides a direct source of seawater for the fire main system?

- (a) Sea chest suction
- (b) Fire pump stuffing box
- (c) Rosebox suction
- (d) Cofferdam sluice valve

If choice a is selected set score to 1.

172. (1.7.7.4.2-4) While fighting a fire, in order to utilize two hoses from a single 'wye' gate attached to a hydrant outlet, you need only turn the valve handle _____.

- (a) at the base of the "Y" counterclockwise 180°
- (b) at the base of the "Y" in either direction
- (c) on each leg of the "Y" 90°
- (d) on each leg of the "Y" 180°

If choice c is selected set score to 1.

173. (1.7.7.4.2-3) The fire main system should be flushed with fresh water whenever possible to _____.

- (a) prevent corrosion of valve stems
- (b) identify loose pipe joints
- (c) eliminate cracking of fire hose linings
- (d) help destroy marine growth

If choice d is selected set score to 1.

174. (1.7.7.4.2-2) In the fire main system, quick cleaning strainers are located at the _____.

- (a) pump discharge
- (b) pump suctions
- (c) hose nozzle
- (d) fire hydrants

If choice d is selected set score to 1.

175. (1.7.8.1-14) One of the disadvantages of using carbon dioxide to extinguish a fire in an enclosed space is _____.

- (a) the CO2 gas is lighter than air and a large amount is required to extinguish a fire near the deck
- (b) prolonged exposure to high concentrations of CO2 gas causes suffocation
- (c) the 'snow' which is sometimes discharged along with the gas is toxic
- (d) rapid dissipation of the CO2 vapor

If choice b is selected set score to 1.

176. (1.7.8.1-13) As a firefighting medium, CO2 can be dangerous under certain conditions as it can cause _____.

- (a) hallucinations
- (b) carbon monoxide poisoning
- (c) undulation
- (d) freeze burns and blistering

If choice d is selected set score to 1.

177. (1.7.8.1-12) Which extinguishing agent is most likely to allow reflash as a result of not cooling the fuel below its ignition temperature?

- (a) CO2
- (b) Water stream
- (c) Water fog
- (d) Foam

If choice a is selected set score to 1.

178. (1.7.8-1-11) Which of the following statements is true concerning carbon dioxide when used as a fire extinguishing agent?

- (a) Its total cooling effect is far greater than water.
- (b) Carbon dioxide is corrosive when exposed to fire.
- (c) Its smothering effect is excellent for class B fires.
- (d) Carbon dioxide should be applied slowly to a large engine room fire.

If choice c is selected set score to 1.

179. (1.7.8.1-16) Dry chemical extinguishing agents extinguish a fire by _____.

- (a) breaking up the molecular chain reaction
- (b) cooling the fuel below ignition temperature
- (c) removing the fuel by absorbing the heated vapors
- (d) smothering and removing the oxygen from the fuel

If choice a is selected set score to 1.

180. (1.7.8.1-15) The advantage of using a dry chemical fire extinguishing agent is _____.

- (a) its good stability and non-toxicity
- (b) permanent extinguishment regardless of the reignition sources
- (c) its excellent cooling ability
- (d) all of the above

If choice a is selected set score to 1.

181. (1.7.8.1-8) A large oil fire on the weather deck of a ship can be effectively fought using _____.

- (a) high velocity fog
- (b) foam
- (c) soda acid
- (d) dry chemical

If choice b is selected set score to 1.

182. (1.7.8.1-7) When an oil fire has been extinguished, the surface of the oil should be kept covered with foam to prevent _____.

- (a) boiling of the heated oil
- (b) toxic fumes from escaping to the surface
- (c) air from contacting the oil vapors permitting reignition
- (d) spontaneous combustion below the oil surface

If choice c is selected set score to 1.

183. (1.7.8.1-6) One of the limitations of foam as a fire extinguishing agent is that foam _____.

- (a) cannot be made with salt water
- (b) conducts electricity
- (c) is heavier than oil and sinks below it surface
- (d) is corrosive and a hazard to fire fighters

If choice b is selected set score to 1.

184. (1.7.8.1-5) Aqueous Film Forming Foam (AFFF), commonly known as 'light water', is especially suitable for fighting _____.

- (a) any class D fire
- (b) oil fires in the engine room bilges
- (c) class C fires in paint lockers
- (d) all of the above

If choice b is selected set score to 1.

185. (1.7.8.2-3) You notice smoke coming from an open laundry room doorway, which smells like electrical insulation. After activating the fire alarm, which of the following would be the lowest action priority? -

- (a) Locate the nearest CO2 or dry chemical extinguisher.
- (b) Break out the nearest fire hose.
- (c) Close the door to the room.
- (d) Secure power to the washers and dryers.

If choice b is selected set score to 1.

186. (1.7.8.2-1) It is necessary to cool the bulkheads and decks surrounding a compartment where there is a fire in order to _____.

- (a) cool the metal below its ignition temperature
- (b) form a dense coating of smothering steam
- (c) prevent oxygen from reaching the flames
- (d) prevent the fire from spreading by the conduction of heat

If choice d is selected set score to 1.

187. (1.7.8.2-2) In the event of a fire, the doors to a stair tower must be closed to prevent the spread of fire by_____.

- (a) conduction
- (b) radiation
- (c) ventilation
- (d) convection

If choice d is selected set score to 1.

188. (1.7.9.1-2) The upper explosive limit (UEL) of a mixture of flammable vapors and air is defined as _____.

- (a) that concentration above which there is just enough flammable vapor to produce an explosion
- (b) that concentration above which the mixture is too rich to burn
- (c) the percentage of flammable vapor by volume in air sufficient to create an explosion
- (d) the percentage of oxygen present in the air sufficient to support combustion

If choice b is selected set score to 1.

189. (1.7.9.1-1) All of the following are part of the fire triangle EXCEPT _____.

- (a) heat
- (b) electricity
- (c) oxygen
- (d) fuel

If choice b is selected set score to 1.

190. (1.7.9.2.1-1) In figure 1 of the illustration, fire would spread to compartment "B" by _____. SF-0013

- (a) radiation
- (b) impingement
- (c) convection
- (d) conduction

If choice d is selected set score to 1.

191. (1.7.9.2.2-2) To prevent the spread of fire by convection you should _____.

- (a) cool the bulkhead around the fire
- (b) close all openings to the area
- (c) shut off electrical power
- (d) remove combustibles from direct exposure

If choice b is selected set score to 1.

192. (1.7.9.2.2-1) The spreading of fire as a result of heat being carried through a vessel's ventilation system is an example of heat transfer by _____.

- (a) conduction
- (b) radiation
- (c) windage
- (d) convection

If choice d is selected set score to 1.

193. (1.7.9.2.3-1) Radiation can cause a fire to spread by _____.

- (a) burning liquids flowing into another space
- (b) the transfer of heat across an unobstructed space
- (c) heated gases flowing through ventilation systems
- (d) transmitting the heat of a fire through the ship's metal

If choice b is selected set score to 1.

194. (1.7.9.3.1-4) If the items shown in the illustration are burning, this fire would be a Class _____. SF-0001

- (a) "D"
- (b) "C"
- (c) "B"
- (d) "A"

If choice d is selected set score to 1.

195. (1.7.9.3.1-1) A burning mattress is considered as which of the following classes of fire?

- (a) Class "C"
- (b) Class "A"
- (c) Class "B"
- (d) Class "D"

If choice b is selected set score to 1.

196. (1.7.9.3.1-2) A fire in a pile of canvas would be classified as a _____.

- (a) class C
- (b) class B
- (c) class A
- (d) class D

If choice c is selected set score to 1.

197. (1.7.9.3.1-3) A fire in a pile of dunnage would be classified as a _____.

- (a) class B
- (b) class C
- (c) class A
- (d) class D

If choice c is selected set score to 1.

198. (1.7.9.3.1-5) A fire involving trash and paper waste would be classified as a _____.

- (a) class B
- (b) class D
- (c) class A
- (d) class C

If choice c is selected set score to 1.

199. (1.7.9.3.1-6) Burning wood is considered to be which of the listed classes of fire?

- (a) Class A
- (b) Class B
- (c) Class C
- (d) Class D

If choice a is selected set score to 1.

200. (1.7.9.3.1-7) A fire that has developed in a pile of rubber gasket material would be classified as a _____.

- (a) class B
- (b) class C
- (c) class A
- (d) class D

If choice c is selected set score to 1.

201. (1.7.9.3.2-2) A fire in the paint locker would probably be _____.

- (a) Class A
- (b) Class B
- (c) Class D
- (d) Class C

If choice b is selected set score to 1.

202. (1.7.9.3.2-4) A galley grease fire would be classified as _____.

- (a) Class A
- (b) Class C
- (c) Class B
- (d) Class D

If choice c is selected set score to 1.

203. (1.7.9.3.2-5) The class of fire on which a blanketing effect is essential to extinguish the fire is _____.

- (a) class A
- (b) class D
- (c) class B
- (d) class C

If choice c is selected set score to 1.

204. (1.7.9.3.2-7) Burning diesel oil should be treated as which class of fire?

- (a) Class "D"
- (b) Class "A"
- (c) Class "C"
- (d) Class "B"

If choice d is selected set score to 1.

205. (1.7.9.3.2-8) Which of the listed classes of fire would most likely occur in the engine room of a vessel?

- (a) Classes C and D
- (b) Classes B and C
- (c) Classes A and D
- (d) Classes A and B

If choice b is selected set score to 1.

206. (1.7.9.3.2-1) A class "B" fire develops on the weather deck amidships of moored tank vessel. The fire party should man the _____.

- (a) leeward monitor and direct the foam onto a vertical surface while applying a solid stream of water to wash residual fuel over the side away from the pier
- (b) windward monitor and direct the foam onto a vertical surface while applying water fog to the fire
- (c) leeward monitor and direct the foam onto a vertical surface while applying water fog to protect the monitor operator
- (d) windward monitor and direct the foam onto a vertical surface while standing by with a charged hose to protect the monitor operator with water fog if needed

If choice d is selected set score to 1.

207. (1.7.9.3.2-3) Which of the fire extinguishing agents listed can be used to effectively combat a class B fire?

- (a) CO2
- (b) All of the above
- (c) Dry chemical
- (d) Foam

If choice b is selected set score to 1.

208. (1.7.9.3.2-6) Which of the listed burning materials would be described as a class "B" fire?

- (a) Lube oil
- (b) Acetylene
- (c) Grease
- (d) All of the above

If choice d is selected set score to 1.

209. (1.7.9.3.3-1) To fight a class "C" fire, you should use carbon dioxide or _____.

- (a) dry chemical
- (b) chemical foam
- (c) chemically treated saw dust
- (d) mechanical foam

If choice a is selected set score to 1.

210. (1.7.9.3.3-5) Which of the hazards listed is of a primary concern, other than fire damage, associated with a class C fire?

- (a) Susceptible to reflash
- (b) Explosion
- (c) Electrocution or shock
- (d) Deep seated fire

If choice c is selected set score to 1.

211. (1.7.9.3.3-2) A fire, occurring in the windings, of an overloaded electrical motor, is considered a _____.

- (a) class "B" fire
- (b) class "A" fire
- (c) class "C" fire
- (d) class "D" fire

If choice c is selected set score to 1.

212. (1.7.9.3.3-3) When combating a class C fire, which of the following dangers may be present?

- (a) Toxic fumes from burning insulation or electric shock
- (b) Increased surface area of the burning fluid
- (c) Water damage to machinery not involved in the fire
- (d) Flooding of the vessel

If choice a is selected set score to 1.

213. (1.7.9.3.3-4) Class C fires may be combated using a _____.

- (a) carbon dioxide extinguisher
- (b) Halon extinguisher
- (c) dry chemical extinguisher
- (d) all of the above

If choice d is selected set score to 1.

214. (1.7.9.3.4-1) A class "D" fire would involve the burning of _____.

- (a) magnesium
- (b) diesel oil
- (c) electrical insulation
- (d) dunnage

If choice a is selected set score to 1.

215. (1.7.9.3.4-4) "Dry Powder" fire extinguishers, which contain a mixture of graphite and sodium chloride as the extinguishing agent, are generally used to fight which type of fire?

- (a) Class C
- (b) Class B
- (c) Class D
- (d) all of the above

If choice c is selected set score to 1.

216. (1.7.9.3.4-2) A fire involving aluminum powder would be a class _____.

- (a) "A" fire
- (b) "D" fire
- (c) "B" fire
- (d) "C" fire

If choice b is selected set score to 1.

217. (1.7.9.3.4-3) A magnesium fire would be classified as a _____.

- (a) class B
- (b) class D
- (c) class A
- (d) class C

If choice b is selected set score to 1.

218. (1.7.9.3.5-1) Fires are grouped into which of the listed categories?

- (a) Flammable solids, liquids, and gases
- (b) Combustible solids, liquids, and gases
- (c) Type 1, 2, 3, and 4
- (d) Class A, B, C, and D

If choice d is selected set score to 1.

219. (1.7.9.4.1-1) Which of the listed sources of ignition may cause fuel vapors to ignite?

- (a) An open and running motor
- (b) Loose wiring
- (c) Static electricity
- (d) All of the above

If choice d is selected set score to 1.

220. (1.7.9.4.1-2) A fire can be extinguished by removing _____.

- (a) the oxygen
- (b) the fuel
- (c) the heat
- (d) any of the above

If choice d is selected set score to 1.

221. (1.7.9.4.1-3) Good housekeeping on a vessel prevents fires by _____.

- (a) improving personnel qualifications
- (b) allowing better access in an emergency
- (c) eliminating trip hazards
- (d) eliminating potential fuel sources

If choice d is selected set score to 1.

222. (1.7.9.4.2-2) The process that occurs when heat is generated by a chemical reaction within a substance and continues to a point of ignition is known as _____.

- (a) chemical ignition
- (b) chemical combustion
- (c) spontaneous combustion
- (d) radiation ignition

If choice c is selected set score to 1.

223. (1.7.9.4.2-3) Hazardous conditions exist which may result in spontaneous combustion when _____.

- (a) all of the above
- (b) oil soaked rags are stowed in the machine shop
- (c) dry metal turnings accumulate
- (d) powdered aluminum is stowed dry

If choice b is selected set score to 1.

224. (1.7.9.4.2-4) To prevent oily rags from spontaneously igniting they should be _____.

- (a) kept in nonmetal containers
- (b) kept in the paint locker
- (c) cleaned thoroughly for reuse
- (d) discarded as soon as possible

If choice d is selected set score to 1.

225. (1.7.9.4.2-5) A simple precaution to reduce the possibility of accidental fires in the paint locker is to _____.

- (a) store paint cans on metal shelves only
- (b) place a portable fire extinguisher immediately outside the locker
- (c) label the fixed firefighting system
- (d) not allow oily rags to accumulate in the space

If choice d is selected set score to 1.

226. (1.7.9.4.2-1) Through which of the listed processes is sufficient heat produced to cause spontaneous ignition?

- (a) Anaerobic decomposition
- (b) Aeration
- (c) Putrefaction
- (d) Oxidation

If choice d is selected set score to 1.

227. (1.7.10.1-4) To detect the presence of explosive gases in any space, tank, or compartment, you should use a _____.

- (a) flame scanner
- (b) halide torch
- (c) combustible gas indicator
- (d) detector filament

If choice c is selected set score to 1.

228. (1.7.10.1-3) The reading of a combustible gas indicator indicates the percentage of the _____.

- (a) upper explosive limit of a flammable gas concentration
- (b) lower explosive limit of a flammable gas concentration
- (c) concentration of flammable gas in a compartment
- (d) concentration by weight of nonflammable gas in a compartment

If choice b is selected set score to 1.

229. (1.7.10.1-2) Which of the following statements is true regarding oxygen indicators?

- (a) The instrument is capable of providing an immediate accurate reading of any space with no delay.
- (b) Prolonged exposure to gases such as CO2 may affect the accuracy of the indicator.
- (c) A cotton filter placed in the end of the sampling tube prevents damaging the instrument when exposed to strongly acidic gases.
- (d) All of the above.

If choice b is selected set score to 1.

230. (1.7.10.1-1) An oxygen indicator will detect _____.

- (a) the presence of harmful amounts of carbon monoxide
- (b) concentrations of explosive gas
- (c) an oxygen deficiency in a space
- (d) all of the above

If choice c is selected set score to 1.

231. (1.7.10.2-1) If you see an individual fall overboard, you should _____.

- (a) hail 'Man Overboard'
- (b) throw a life ring overboard
- (c) pass the word to the bridge
- (d) all of the above

If choice d is selected set score to 1.

232. (1.7.10.3-1) Which of the gases listed is the poisonous gas most likely to be found in a closed compartment involved in a fire?

- (a) Nitrogen
- (b) Hydrogen
- (c) Carbon monoxide
- (d) Carbon dioxide

If choice c is selected set score to 1.

233. (1.7.10.3-2) A tank has been sealed and unventilated for a long period of time. Which of the following statements is true?

- (a) The tank is especially dangerous to enter.
- (b) Carbon monoxide is present.
- (c) Water vapor present when the tank was sealed has oxidized.
- (d) The tank is safe to enter.

If choice a is selected set score to 1.

234. (1.7.10.3-3) A good approach to personnel safety is to assume that all tanks and pump rooms are potentially dangerous. You should immediately leave an area whenever _____.

- ○ (a) you experience an abnormal bodily sensation
- ○ (b) you have irritation of the eyes, nose, or throat
- ○ (c) you smell an unusual odor
- • (d) any of the above conditions occur

If choice d is selected set score to 1.

235. (1.7.10.3-4) High concentrations of hydrogen sulfide gas are most dangerous to personnel because they can _____.

- ○ (a) cause eye inflammation
- ○ (b) cause involuntary skeletal muscle contractions
- • (c) paralyze your breathing system
- ○ (d) cause dizziness

If choice c is selected set score to 1.

236. (1.7.11.1-1) By definition, combustible liquids are liquids which _____.

- • (a) have a flash point of 80°F or higher
- ○ (b) are highly volatile with a flash point of 0°F
- ○ (c) give off flammable vapors at or below 80°F
- ○ (d) spontaneously ignite

If choice a is selected set score to 1.

237. (1.7.11.1-2) By definition, an example of a flammable liquid is _____.

- • (a) gasoline
- ○ (b) caustic potash
- ○ (c) kerosene
- ○ (d) animal and vegetable oils

If choice a is selected set score to 1.

238. (1.7.11.2.1-2) Span gas is used aboard liquefied natural gas carriers to _____.

- ○ (a) inert the barrier spaces
- • (b) calibrate the gas leak detectors
- ○ (c) odorize the cargo
- ○ (d) detect leaks in cargo piping

If choice b is selected set score to 1.

239. (1.7.11.2.1-1) An LNG carrier has an approved type of gas detecting system to detect methane leaks in the _____.

- (a) cargo handling rooms
- (b) barrier spaces
- (c) boiler burner supply piping
- (d) all of the above

If choice d is selected set score to 1.

240. (1.7.11.2.2-2) Which of the following hazards is associated with the handling of petroleum products?

- (a) Fire
- (b) Explosion
- (c) Asphyxiation
- (d) All of the above

If choice d is selected set score to 1.

241. (1.7.11.2.2-1) Petroleum vapors are dangerous _____.

- (a) only if the oxygen concentration is below 16 percent
- (b) at all times due to their toxicity
- (c) only if the source of the vapor is above its flash point
- (d) only if the vapor is between the upper and lower explosive limit

If choice b is selected set score to 1.

242. (1.7.11.2.2-4) When checking the level of a volatile liquid in a tank on the weather deck of a tank vessel, you should position yourself _____.

- (a) on the windward side of the opening
- (b) on the leeward side of the opening
- (c) at a right angle to the wind direction
- (d) so that the obstruction of your body will protect you from the fumes

If choice c is selected set score to 1.

243. (1.7.11.2.2-3) Which of the following methods will reduce the possibility of producing an electrical spark?

- (a) Placing an insulating flange or a section of nonconducting hose in the hose setup.
- (b) Using a cargo hose with a built in electrical bonding wire.
- (c) Connecting a bonding wire between the shore side piping and the vessel.
- (d) All of the above.

If choice d is selected set score to 1.

244. (1.7.11.3.1-1) The vapors given off by heated fuel oil are flammable, explosive, and _____.

- (a) odorless
- (b) heavier than air
- (c) lighter than air
- (d) nontoxic

If choice b is selected set score to 1.

245. (1.7.11.3.2-1) Bunker "C" is classified as a grade _____.

- (a) D liquid
- (b) A liquid
- (c) B liquid
- (d) E liquid

If choice d is selected set score to 1.

246. (1.7.11.4-2) A specific document which identifies a chemical, and lists its physical properties, health hazards, required controls, firefighting procedures, cleanup methods, waste disposal, and the safe handling and storage requirements, is commonly called a _____.

- (a) Material Safety Data Sheet
- (b) Hazardous Chemical Information Sheet
- (c) Hazardous Chemical Loading Document
- (d) Physical/Chemical Characteristics Document

If choice a is selected set score to 1.

247. (1.7.11.4-1) What term is listed on a Material Safety Data Sheet (MSDS) to describe a chemical that can produce life-threatening or seriously disabling health hazard?

- (a) Moderate toxicity
- (b) High toxicity
- (c) Recommended toxicity
- (d) Low toxicity

If choice b is selected set score to 1.

248. (1.7.11.4-3) Which health hazard term is listed on a Material Safety Data Sheet (MSDS) to indicate that contact with the substance will freeze body tissue on contact?

- (a) Cryogenic
- (b) Freeze hazard
- (c) Cyanosis
- (d) Freon hazard

If choice a is selected set score to 1.

249. (1.7.11.5.1-1) A Crude Oil Wash (COW) system is considered as _____.

- (a) a Butterworth system using crude oil instead of water as the cleaning medium
- (b) a mechanism which filters and purifies crude oil
- (c) a water operated Butterworth system
- (d) a cleanup for pump room bilges

If choice a is selected set score to 1.

250. (1.7.11.5.1-2) In order for you to operate your vessel's crude oil wash system, the cargo tanks to be washed must be _____.

- (a) gas free
- (b) full of cargo
- (c) opened to the atmosphere for ventilation
- (d) inerted

If choice d is selected set score to 1.

251. (1.7.11.5.1-3) Both crude oil washing and water washing use direct impingement to remove residue from tanks. Crude oil washing has an additional advantage, in utilizing _____.

- (a) a higher temperature
- (b) a higher pressure jet
- (c) the solvent effect of the crude oil
- (d) none of the above.

If choice c is selected set score to 1.

252. (1.7.11.5.2-1) The component in an inert gas system used for cleaning the gas of solid and sulphur combustion products, while simultaneously cooling the inert gas, is called the _____.

- (a) scrubber
- (b) cooler
- (c) filter
- (d) purifier

If choice a is selected set score to 1.

253. (1.7.11.5.2-2) How does an inert gas system on a tanker function to prevent explosions in cargo tanks?

- (a) Inert gas filters out the flammable vapors from the cargo tank spaces.
- (b) De-energizes the "charged mist" effect.
- (c) Maintains a positive pressure on the vent header to cool the flammable vapors.
- (d) Inert gas dilutes the flammable vapor and air concentrations to keep them below the lower explosive limit.

If choice d is selected set score to 1.

254. (1.7.11.5.2-3) The primary function of a "flue gas type" inert gas system is to _____.

- (a) supply conditioned gas with reduced oxygen content
- (b) produce 100% oxygen free gas
- (c) generate a high oxygen content gas
- (d) produce a gas of 100% pure nitrogen

If choice a is selected set score to 1.

255. (1.7.11.5.2-4) When securing the operation of an inert gas system, the final step should be _____.

- (a) close the deck isolating valve
- (b) close the flue gas isolating valve
- (c) secure the salt water supply to the scrubber
- (d) secure the inert gas blower

If choice c is selected set score to 1.

256. (1.7.11.6-2) If a cargo tank has not been certified as gas free, _____.

- (a) breathing apparatus would not be necessary in an emergency as you would only be in the tank a short time
- (b) a man may work safely without breathing apparatus in cold weather, as vapors are less volatile
- (c) entry without a breathing apparatus may be made at the top of the tank since petroleum vapors are heavier than air
- (d) breathing apparatus should always be used

If choice d is selected set score to 1.

257. (1.7.11.6-3) A tank or compartment is "gas free" when there is an absence of dangerous concentrations of _____.

- (a) all flammable liquids
- (b) flammable or toxic gases
- (c) residues from cargo oil
- (d) any combustible liquid

If choice b is selected set score to 1.

258. (1.7.11.6-4) If emergency welding repairs must be made to the upper area of a fuel tank, the tank and/or adjacent compartments may need to be _____.

- (a) inerted
- (b) filled with water
- (c) gas freed
- (d) all of the above as necessary

If choice d is selected set score to 1.

259. (1.7.11.6-5) A fuel tank is considered to be gas free when the tank is _____.

- (a) free of most flammable gas concentrations
- (b) thoroughly ventilated for at least 24 hours
- (c) inerted with carbon dioxide for 24 hours
- (d) free of all dangerous concentrations of flammable or toxic gases

If choice d is selected set score to 1.

260. (1.7.11.6-1) What information can be obtained from a marine chemist's certificate on a tank barge?

- (a) The tanks which are safe to enter when the certificate was issued.
- (b) The quality of the barge's cargo.
- (c) The barge's stability information.
- (d) The number of fire extinguishers required onboard.

If choice a is selected set score to 1.

261. (1.7.11.7-2) "Portable" oil tank cleaning machines are usually provided with a water supply from the _____.

- (a) inert gas scrubber
- (b) fire main
- (c) potable water supply
- (d) mucking supply system

If choice b is selected set score to 1.

262. (1.7.11.7-1) An electrically "charged mist" will be found in a _____.

- (a) flash evaporator flash chamber
- (b) cargo tank during Butterworthing
- (c) diesel engine cylinder
- (d) fuel tank vent outlet

If choice b is selected set score to 1.

263. (1.7.11.7-3) When using portable tank cleaning machines, the hoses may be disconnected when _____.

- (a) the hose has been partially drained
- (b) a sailor is standing by the machine
- (c) the machine is not inside the tank
- (d) the machine is inside the tank

If choice c is selected set score to 1.

1. (2.5.8.1-2) You are in compartment "A", shown in the illustration, and suspect a fire in compartment "B". In order to check for and confirm the fire in compartment "B" you should _____. SF-0005

- (a) feel the bulkhead
- (b) tap the bulkhead
- (c) open the watertight door
- (d) move a lighted candle along watertight door seal

If choice a is selected set score to 1.

2. (2.5.8.1-4) The most effective method of extinguishing a class "A" fire is by _____.

- (a) quenching and cooling
- (b) using nonconducting extinguishers
- (c) blanketing and smothering
- (d) using a sodium based dry chemical

If choice a is selected set score to 1.

3. (2.5.8.1-10) If deck cargo is carried, it should be stowed so that it _____.

- (a) will cover less than 25 percent of deck space
- (b) does not block access to the fire station hydrant
- (c) will be easily visible from the bridge
- (d) is not higher than 12 inches above the deck

If choice b is selected set score to 1.

4. (2.5.8.1-9) In firefighting, the term 'protecting exposures' means _____.

- (a) protecting exposed areas of the superstructure from flames
- (b) keeping flames from burning at the tank vents
- (c) protecting fire fighters from direct exposure to the heat of the fire
- (d) taking measures to prevent the spread of fire from the involved compartment to an adjacent compartment

If choice d is selected set score to 1.

5. (2.5.8.1-8) During cargo operations, a deck fire has occurred due to a leaking cargo line. You should FIRST _____.

- (a) stop the transfer of cargo
- (b) prevent the spread of fire with a foam dam
- (c) apply CO2 on the burning fuel at its source
- (d) blanket the cargo spill with foam

If choice a is selected set score to 1.

6. (2.5.8.1-6) When fighting a shipboard fire, crew members securing doorways, hatches, and applying cooling water to adjacent decks and bulkheads, while monitoring the spread of heat and smoke, are setting a _____.

- ○ (a) safety perimeter
- ○ (b) cooling zone
- • (c) fire boundary
- ○ (d) buffer zone

If choice c is selected set score to 1.

7. (2.5.8.1-7) When approaching a fire from windward, you should shield firefighters from the fire by using an applicator and _____.

- ○ (a) foam spray
- • (b) low-velocity fog
- ○ (c) a straight stream of water
- ○ (d) high-velocity fog

If choice b is selected set score to 1.

8. (2.5.8.1-1) Which of the following statements represents the correct action to take when three crew members discover a fire?

- ○ (a) One man report the fire, one man fight the fire, and one man act as a safety observer.
- ○ (b) One man reports the fire, and the other two men fight the fire.
- • (c) One man reports the fire, one man fights the fire, and one man evacuates and secures the area.
- ○ (d) All three men fight the fire and report it immediately after it is extinguished.

If choice c is selected set score to 1.

9. (2.5.8.1-5) What is the purpose of opening the doors and portholes in figure 2 of the illustration? SF-0013

- ○ (a) To keep the hose teams cool.
- ○ (b) To allow water used to fight the fire to flow out of the superstructure.
- • (c) To allow venting of combustion products from the fire to the atmosphere.
- ○ (d) To provide airflow around the compartment in the order to contain the fire.

If choice c is selected set score to 1.

10. (2.5.8.1-3) If there has been a fire in a closed unventilated compartment it may be unsafe to enter because of _____.

- ○ (a) excess hydrogen
- ○ (b) unburned carbon particles
- ○ (c) excess nitrogen
- • (d) a lack of oxygen

If choice d is selected set score to 1.

11. (2.5.8.2-3) When combating a major electrical fire at sea, the main consideration is _____.

- ○ (a) preventing saltwater damage to electrical equipment
- • (b) reducing the possibility of electrical shock to personnel
- ○ (c) preventing a total loss of electrical power
- ○ (d) eliminating the toxic fumes from burning insulation

If choice b is selected set score to 1.

12. (2.5.8.2-5) The most important characteristic of a fire extinguishing agent to be used on electrical fires is for the agent to be _____.

- ○ (a) easily removable
- ○ (b) wet
- ○ (c) flame resistant
- • (d) nonconducting

If choice d is selected set score to 1.

13. (2.5.8.2-1) Which extinguishing agent is the best for use on electrical fires?

- ○ (a) Water fog
- ○ (b) Dry Chemical
- ○ (c) Foam
- • (d) CO2

If choice d is selected set score to 1.

14. (2.5.8.2-4) If a fire occurs in an electric cable, in which the inner layers of insulation, or the insulation covered by armor is burning, you should _____.

- ○ (a) secure power to the cable
- ○ (b) cut the cable with an insulated cable cutter
- ○ (c) separate the two ends
- • (d) all of the above

If choice d is selected set score to 1.

15. (2.5.8.2-2) You notice smoke coming from an open laundry room doorway, which smells like electrical insulation. After activating the fire alarm, which of the following would be the lowest action priority? -

- ○ (a) Close the door to the room.
- ○ (b) Locate the nearest CO2 or dry chemical extinguisher.
- ○ (c) Secure power to the washers and dryers.
- • (d) Break out the nearest fire hose.

If choice d is selected set score to 1.

16. (2.5.8.3-5) In fighting a fire in a fuel tank, the FIRST action you should attempt is to _____.

- (a) secure all sources of fresh air to the tank
- (b) begin transferring the fuel to other tanks
- (c) station someone at the fixed CO2 release controls
- (d) top off the tank to force out all vapors

If choice a is selected set score to 1.

17. (2.5.8.3-3) If a fire ignites in the engine room as a result of a high pressure fuel oil leak, you should FIRST _____.

- (a) secure the ventilation
- (b) secure the generator
- (c) find a soda acid extinguisher
- (d) shut off the fuel oil supply

If choice d is selected set score to 1.

18. (2.5.8.3-4) The longer an oil fire is permitted to burn, the _____.

- (a) easier it is to extinguish
- (b) less chance there is of reignition
- (c) harder it is to extinguish
- (d) easier it is to control

If choice c is selected set score to 1.

19. (2.5.8.3-2) The best means of combating an oil fire on the surface of the water surrounding a vessel tied to the pier is to use _____.

- (a) foam directed against the vessel's side
- (b) dry chemical around the fire
- (c) water fog over the fire
- (d) solid water streams directly into the fire

If choice a is selected set score to 1.

20. (2.5.8.3-1) A large fire has developed in the HFO centrifuge room accessed by door "E". To combat the fire you should _____. SF-0013

- (a) only need to set up a hose team to cool the door, then open the door and extinguish the fire using a type B-II extinguisher
- (b) advance the hose team into the room without any additional preparatory action
- (c) cool adjoining horizontal and vertical surfaces before opening the door to extinguish the fire
- (d) keep the door tightly closed until all the oil has been consumed by the fire

If choice c is selected set score to 1.

21. (2.5.8.4-1) When fighting a liquefied natural gas fire, you should _____.

- (a) secure the source of gas, then extinguish the fire
- (b) extinguish the fire, then secure the source of gas
- (c) use only carbon dioxide
- (d) use only dry chemical

If choice a is selected set score to 1.

22. (2.5.8.5-2) One of the main concerns when fighting a galley fire is _____.

- (a) the loss of stability
- (b) contamination food with extinguishing agent
- (c) the igniting of a grease fire in the range hood ventilation system
- (d) spreading of fire through the engineering space

If choice c is selected set score to 1.

23. (2.5.8.5-1) In the event of an exhaust duct fire, most dry chemical and carbon dioxide galley range fixed extinguishing systems are automatically activated through the action of a stainless steel cable, spring and a _____.

- (a) fusible link
- (b) stack switch
- (c) thermostat
- (d) pyrostat

If choice a is selected set score to 1.

24. (2.5.10.1-3) The airborne concentrations of substances (such as hydrogen sulfide) under which nearly all workers may be repeatedly exposed without adverse effects are called _____.

- (a) exposure limits
- (b) concentration limits
- (c) threshold limit values
- (d) substance limit values

If choice c is selected set score to 1.

25. (2.5.10.1-4) If flammable vapors have penetrated a gas free space, which of the following actions would be the most hazardous to perform?

- (a) Opening switches in the space to de-energize circuits.
- (b) Closing switches adjacent to the space to operate vent fans.
- (c) Leaving electrical circuits energized in the space.
- (d) Securing all power to the space from a remote location.

If choice a is selected set score to 1.

26. (2.5.10.1-1) A tank has been sealed and unventilated for a long period of time. Which of the following statements is true?

- (a) The tank is safe to enter.
- (b) The tank is especially dangerous to enter.
- (c) Carbon monoxide is present.
- (d) Water vapor present when the tank was sealed has oxidized.

If choice b is selected set score to 1.

27. (2.5.10.1-2) Before entering any space that has been sealed, its oxygen level should be tested. What level of oxygen in the space is equal to fresh air?

- (a) 10.0%
- (b) 15.8%
- (c) 20.8%
- (d) 25.8%

If choice c is selected set score to 1.

28. (2.5.10.2.1-1) The reading of a combustible gas indicator indicates the percentage of the _____.

- (a) lower explosive limit of a flammable gas concentration
- (b) upper explosive limit of a flammable gas concentration
- (c) concentration of flammable gas in a compartment
- (d) concentration by weight of nonflammable gas in a compartment

If choice a is selected set score to 1.

29. (2.5.10.2.1-2) Combustible gas indicators incorporate the use of a/an _____.

- (a) Wheatstone bridge
- (b) inflatable bag
- (c) vapor-detecting carbon compound
- (d) sensitive liquid chemical

If choice a is selected set score to 1.

30. (2.5.10.2.1-3) Before entering a fuel tank that has been cleaned, it should be checked with an oxygen indicator and a/an _____.

- (a) Halide torch
- (b) flame safety lamp
- (c) Orsat apparatus
- (d) combustible gas indicator

If choice d is selected set score to 1.

31. (2.5.10.2.2-1) An oxygen indicator will detect _____.

- (a) the presence of harmful amounts of carbon monoxide
- (b) concentrations of explosive gas
- (c) an oxygen deficiency in a space
- (d) all of the above

If choice c is selected set score to 1.

32. (2.5.10.2.2-2) Which of the following statements is true regarding oxygen indicators?

- (a) The instrument is capable of providing an immediate accurate reading of any space with no delay.
- (b) Prolonged exposure to gases such as CO2 may affect the accuracy of the indicator.
- (c) A cotton filter placed in the end of the sampling tube prevents damaging the instrument when exposed to strongly acidic gases.
- (d) All of the above.

If choice b is selected set score to 1.

33. (2.5.10.2.3-1) For hydrogen sulfide detection, sensitized tapes indicate the presence of this gas by means of discoloration of an exposed spot on the tape. The shade of the color on the spot depends upon the concentration of the gas and _____.

- (a) air temperature during exposure
- (b) air pressure during exposure
- (c) humidity during exposure
- (d) duration of exposure

If choice d is selected set score to 1.

34. (2.5.10.2.3-2) When required to work in an area where explosive gases may accumulate, you should use tools which are _____.

- (a) approved by the Coast Guard
- (b) high carbon steel
- (c) fixed with a ferrous cover
- (d) non-sparking

If choice d is selected set score to 1.

35. (2.5.10.3-1) If you see an individual fall overboard, you should _____.

- (a) throw a life ring overboard
- (b) hail 'Man Overboard'
- (c) pass the word to the bridge
- (d) all of the above

If choice d is selected set score to 1.

36. (2.5.11.1-1) The worst atmospheric condition for dispersion of hydrogen sulfide is _____.

- (a) gusty winds with rain
- (b) heavy rain
- (c) full sun with high winds
- (d) nearly calm, clear nights or early morning

If choice d is selected set score to 1.

37. (2.5.11.1-3) The explosive range of methane is 5% to 15% by volume in air. This means a vapor/air mixture of _____.

- (a) 20 percent methane by volume is too lean to burn
- (b) 10 percent methane by volume is too rich to burn
- (c) 5 percent methane by volume will give a reading of 100 percent L.E.L. on a combustible gas indicator
- (d) 3 percent methane by volume is too rich to burn

If choice c is selected set score to 1.

38. (2.5.11.1-6) Which of the following conditions is true concerning flammable liquid vapors with a concentration above the upper explosive limit?

- (a) The mixture is too rich to burn.
- (b) Conditions are perfect for combustion.
- (c) The vapor is about to explode.
- (d) The mixture is too lean to burn.

If choice a is selected set score to 1.

39. (2.5.11.1-4) The highest concentration of a harmful substance to which a person may be exposed without danger to health, is termed the _____.

- (a) vapor pressure
- (b) tolerance point
- (c) threshold limit value
- (d) odor threshold

If choice c is selected set score to 1.

40. (2.5.11.1-5) By definition, an example of a flammable liquid is _____.

- (a) animal and vegetable oils
- (b) caustic potash
- (c) kerosene
- (d) gasoline

If choice d is selected set score to 1.

41. (2.5.11.1-2) According to Coast Guard Regulations (46 CFR), a flammable liquid with a Reid vapor pressure of 8 1/2 psi or less, and a flash point of 80°F or below, is a grade _____.

- ○ (a) D
- ○ (b) E
- • (c) C
- ○ (d) A

If choice c is selected set score to 1.

42. (2.5.11.2.1-2) Which of the petroleum products listed has a flash point below 150°F?

- • (a) Light fuel oils
- ○ (b) Lubricating oils
- ○ (c) Road oils
- ○ (d) Asphalt

If choice a is selected set score to 1.

43. (2.5.11.2.1-1) The vapors given off by heated fuel oil are flammable, explosive, and _____.

- ○ (a) lighter than air
- • (b) heavier than air
- ○ (c) nontoxic
- ○ (d) odorless

If choice b is selected set score to 1.

44. (2.5.11.2.1-3) When preparing to pump flammable liquids with a centrifugal pump, you should _____.

- ○ (a) draw a small quantity of liquid to prime the pump
- • (b) check for gland leakage and any fire hazard
- ○ (c) have a standby pump running with the discharge valve closed
- ○ (d) lift the relief valve by hand to check its operation

If choice b is selected set score to 1.

45. (2.5.11.2.2-2) Bunker "C" is classified as a grade _____.

- ○ (a) A liquid
- ○ (b) B liquid
- • (c) E liquid
- ○ (d) D liquid

If choice c is selected set score to 1.

46. (2.5.11.2.2-1) Which of the following is classified as a grade "E" combustible liquid?

- (a) Very light naphtha
- (b) Bunker "C"
- (c) Most commercial gasoline
- (d) Benzene

If choice b is selected set score to 1.

47. (2.5.11.3.1-2) Which of the following hazards is associated with the handling of petroleum products?

- (a) Asphyxiation
- (b) Fire
- (c) Explosion
- (d) All of the above

If choice d is selected set score to 1.

48. (2.5.11.3.1-1) The explosive range of petroleum vapors when mixed with air is _____.

- (a) 1% to 6% by volume
- (b) 12% to 20% by volume
- (c) 0% to 1% by volume
- (d) 6% to 12% by volume

If choice a is selected set score to 1.

49. (2.5.11.3.1-3) When checking the level of a volatile liquid in a tank on the weather deck of a tank vessel, you should position yourself _____.

- (a) on the windward side of the opening
- (b) on the leeward side of the opening
- (c) at a right angle to the wind direction
- (d) so that the obstruction of your body will protect you from the fumes

If choice c is selected set score to 1.

50. (2.5.11.3.2-1) Tankers carrying cryogenic cargoes, such as LNG, are fitted with gas detector systems alarmed at 30% of the lower explosive limit. If the gas detector alarms sounds, this means _____.

- (a) the detector is sampling a space in which 30 percent of the atmosphere is explosive
- (b) a flammable vapor concentration exists at the sample point, but it is too lean to burn
- (c) an explosion is about to take place
- (d) the detector sensor is sampling a space where the cargo vapor concentration is 30 percent by volume

If choice b is selected set score to 1.

51. (2.5.11.3.2-2) An LNG carrier has an approved type of gas detecting system to detect methane leaks in the _____.

- (a) barrier spaces
- (b) boiler burner supply piping
- (c) cargo handling rooms
- (d) all of the above

If choice d is selected set score to 1.

52. (2.5.11.3.2-3) Span gas is used aboard liquefied natural gas carriers to _____.

- (a) odorize the cargo
- (b) inert the barrier spaces
- (c) calibrate the gas leak detectors
- (d) detect leaks in cargo piping

If choice c is selected set score to 1.

53. (2.5.11.3.3-2) Individuals who have consumed alcohol within 24 hours of exposure to H2S can tolerate _____.

- (a) unusually large concentrations of H2S
- (b) smaller than normal concentrations of H2S
- (c) moderate concentrations of H2S without the usual reactions
- (d) longer exposure to H2S concentrations

If choice b is selected set score to 1.

54. (2.5.22.3.3-4) High concentrations of hydrogen sulfide gas are most dangerous to personnel because they can _____.

- (a) cause involuntary skeletal muscle contractions
- (b) paralyze your breathing system
- (c) cause eye inflammation
- (d) cause dizziness

If choice b is selected set score to 1.

55. (2.5.11.3.3-3) When pumping sour crude, which gas should be tested for prior to entering the cargo pump room to repair a leaking pump?

- (a) Benzene
- (b) Carbon monoxide
- (c) Hydrogen sulfide
- (d) Tetraethyl lead

If choice c is selected set score to 1.

56. (2.5.11.3.3-1) A high concentration of hydrogen sulfide gas is most likely to be found in which of the locations listed?

- (a) Fire room bilges where hydrazine has accumulated.
- (b) Sewage compartment bilges where leaked sewage has accumulated.
- (c) Engine room bilges where chemical cleaners and solvents have accumulated.
- (d) Emergency battery storage compartment where discharge gases have accumulated.

If choice b is selected set score to 1.

57. (2.5.11.3.4-1) What information can be obtained from a marine chemist's certificate on a tank barge?

- (a) The number of fire extinguishers required onboard.
- (b) The tanks which are safe to enter when the certificate was issued.
- (c) The barge's stability information.
- (d) The quality of the barge's cargo.

If choice b is selected set score to 1.

58. (2.5.11.3.4-2) A tank or compartment is "gas free" when there is an absence of dangerous concentrations of _____.

- (a) any combustible liquid
- (b) all flammable liquids
- (c) flammable or toxic gases
- (d) residues from cargo oil

If choice c is selected set score to 1.

59. (2.5.11.3.4-3) A compartment is tested and found to contain 20.8% oxygen by volume, permissible concentrations of toxic materials, and concentrations of flammable gas just below the lower flammable limit. If the residues are not capable of producing toxic materials or flammable concentrations, what would be the designation listed on the marine chemist's certificate?

- (a) Safe for men - Safe for Fire
- (b) Not safe for men - Not Safe for Fire
- (c) Safe for men - Not Safe for Fire
- (d) Not safe for men - Safe for Fire

If choice c is selected set score to 1.

60. (2.5.11.3.4-4) If, in a compartment or space, the gas or oxygen content is not within permissible concentration, and dangerous gases are either present, or may be produced by residues, what would be the safety designation listed on a marine chemist's certificate?

- (a) Safe for Men - Safe for Fire
- (b) Safe for Men - Not Safe for Fire
- (c) Not Safe for Men - Safe for Fire
- (d) Not Safe for Men - Not Safe for Fire

If choice d is selected set score to 1.

61. (2.5.11.3.4-5) If emergency welding repairs must be made to the upper area of a fuel tank, the tank and/or adjacent compartments may need to be _____.

- o (a) filled with water
- o (b) gas freed
- o (c) inerted
- • (d) all of the above as necessary

If choice d is selected set score to 1.

62. (2.5.11.3.4-6) While in a foreign port, burning and welding repairs are to be carried out on a section of heating coil located in a tank having last contained a grade "D" product. Which of the following procedures should be followed when a certified marine chemist is not available?

- o (a) It is solely the chief engineer's responsibility to ensure all safety precautions are observed, and all entries are to be made in the engine room log.
- o (b) Repairs should proceed as scheduled since a chemist's certificate is not required for that type of work.
- o (c) The repair work cannot be done at this time due to the lack of the chemist's certificate.
- • (d) Prior to any hot work, an inspection must be made by the senior officer present, and an entry made in the official logbook.

If choice d is selected set score to 1.

63. (2.5.11.4-1) A health hazard term listed on a Material Safety Data Sheet (MSDS) that indicates allergic-like reaction in some people after repeated exposure is _____.

- • (a) sensitizer
- o (b) pyrophoric hazard
- o (c) oxidizer
- o (d) skin contact hazard

If choice a is selected set score to 1.

64. (2.5.11.4-4) If the chemical material is a mixture, what must the Material Safety Data Sheet (MSDS) identify?

- • (a) The name of each hazardous ingredient.
- o (b) Other similar mixtures of liquids, solids or gases.
- o (c) Paints or coatings that are safe to use with it.
- o (d) None of the above.

If choice a is selected set score to 1.

65. (2.5.11.4-3) A specific document which identifies a chemical, and lists its physical properties, health hazards, required controls, firefighting procedures, cleanup methods, waste disposal, and the safe handling and storage requirements, is commonly called a _____.

- (a) Physical/Chemical Characteristics Document
- (b) Hazardous Chemical Information Sheet
- (c) Material Safety Data Sheet
- (d) Hazardous Chemical Loading Document

If choice c is selected set score to 1.

66. (2.5.11.4-2) A liquid, as listed on a Material Safety Data Sheet (MSDS), having a flash point below 100°F (37.78°C) is called a/an _____.

- (a) explosive liquid
- (b) combustible liquid
- (c) flammable liquid
- (d) viscous liquid

If choice c is selected set score to 1.

67. (2.5.11.4-5) The physical data term on a Material Safety Data Sheet (MSDS) that indicates if the vapor formed by a material is lighter or heavier than air is called _____.

- (a) vapor density
- (b) vapor pressure
- (c) vapor level
- (d) vapor gravity

If choice a is selected set score to 1.

68. (2.5.12.1-4) To prevent oil from escaping into the sea when ballasting through the cargo piping system, you should FIRST _____.

- (a) open block valves, then start the cargo pump
- (b) start the cargo pump, then open sea suction valves
- (c) open sea suction valves, then start the cargo pump
- (d) open sluice valves, then start the cargo pump

If choice b is selected set score to 1.

69. (2.5.12.1-5) Water ballast placed in a tank that has been crude oil washed, but not water rinsed, shall be regarded as _____.

- ○ (a) crude oil
- ○ (b) segregated ballast
- • (c) dirty ballast
- ○ (d) clean ballast

If choice c is selected set score to 1.

70. (2.5.12.1-1) After ballasting a fuel tank, which of the listed valves should you close FIRST?

- • (a) Sea suction valve
- ○ (b) Tank manifold filling valve
- ○ (c) Deck filling valve
- ○ (d) Pump discharge valve

If choice a is selected set score to 1.

71. (2.5.12.1-2) In order to prevent the unnecessary release of hydrocarbons to atmosphere, when taking on departure ballast, one method used is to _____.

- • (a) allow entering ballast to displace the inert gas to a tank where cargo is currently being discharged
- ○ (b) manually open the pressure/vacuum device
- ○ (c) use blowers to purge the inert gas from tanks
- ○ (d) completely open the mast riser valve

If choice a is selected set score to 1.

72. (2.5.12.1-3) When discharging clean ballast, prior to entering the loading port, if the ballast is determined by the oil monitor to exceed 15 parts per million of oil, the deballasting must _____.

- • (a) be terminated automatically
- ○ (b) be completely discharged in order to load
- ○ (c) be stopped until the oil can settle out, then resumed at a slower discharge rate
- ○ (d) be completed only after "load on top" has been completed

If choice a is selected set score to 1.

73. (2.5.12.2-2) Victual waste is _____.

- ○ (a) the final waste product of a manufacturing process
- ○ (b) the resultant sludge that is collected after water washing a boiler
- ○ (c) the final discharge of sewage treatment plants
- • (d) any garbage that comes from food or food provisions

If choice d is selected set score to 1.

74. (2.5.12.2-4) When dumping garbage into the sea, other than special areas, _____.

- (a) records must be provided and maintained for two years
- (b) an entry into the official log book must be made
- (c) the U.S. Coast Guard must be notified for each occurrence
- (d) no record is required if dumping is carried out more than 25 miles offshore and there is no included plastic material

If choice a is selected set score to 1.

75. (2.5.12.2-5) The amount of garbage disposed must be entered into the records maintained by each ship and stated in _____.

- (a) barrels, measured in 55 gallon drums
- (b) weight in either kilogram or pounds
- (c) cubic yards convertible to long tons
- (d) cubic meters

If choice d is selected set score to 1.

76. (2.5.12.2-3) Which of the following statements is true concerning the overboard discharge of vessel sewage at sea? -

- (a) The vessel may discharge disinfected and comminuted sewage into the sea, from an approved system, only if the vessel is more than three nautical miles from the nearest land.
- (b) The vessel must have an approved sewage plant.
- (c) The vessel may discharge sewage into the sea, from an approved system which is not comminuted or disinfected, only if the vessel is more than 12 nautical miles from the nearest land.
- (d) All of the above

If choice d is selected set score to 1.

77. (2.5.12.2-1) According to 33 CFR's, an oceangoing ship of over 400 gross tons must be fitted with a standard discharge shore connection. What size bolt circle diameter is required for this shore connection to transfer oily ballast to a shore side reception facility?

- (a) 250 mm
- (b) 215 mm
- (c) 125 mm
- (d) 183 mm

If choice d is selected set score to 1.

78. (2.5.12.3.1-7) The most critical part of the bunkering operations, which can result in an oil spill, is when the _____.

- (a) pumping operation is first started
- (b) tanks are being topped off
- (c) system is being lined up
- (d) hose joints are made up

If choice b is selected set score to 1.

79. (2.5.12.3.1-10) When the scuppers are plugged and an oil spill occurs on deck, you should _____.

- (a) remove plugs from scuppers and wash fuel overboard with water
- (b) remove plugs from scuppers to allow the spill to run overboard and wipe the area dry with rags
- (c) remove plugs from scuppers and wash the fuel overboard with a solvent
- (d) use absorbent material, such as sawdust, to clean up the spill

If choice d is selected set score to 1.

80. (2.5.12.3.1-2) Which of the precautions listed should be observed when taking on diesel fuel?

- (a) Secure all lighting to the main deck.
- (b) Provide a portable fan to blow away fumes.
- (c) Display a black triangle during daylight hours.
- (d) Prohibit smoking in the area.

If choice d is selected set score to 1.

81. (2.5.12.3.1-11) Your vessel is taking on bunkers from a shore side facility. If oil begins flowing from one tank vent, which of the following actions should be taken FIRST?

- (a) Close the valve on the tank vent line.
- (b) Set out drip pans and sawdust and begin to mop up the spill.
- (c) Signal the shore control point to shutdown.
- (d) Open the intake valve to an adjacent tank.

If choice c is selected set score to 1.

82. (2.5.12.3.1-3) When should you expect to find an insulating flange in a fueling hose?

- (a) When static electricity is not expected to be a problem.
- (b) When the terminal is equipped with a cathodic protection system.
- (c) When transferring LNG.
- (d) When a bonding cable is employed.

If choice b is selected set score to 1.

83. (2.5.12.3.1-5) One consideration for determining the safest maximum rate at which bunker fuel may be received is by the _____.

- (a) number of tanks to be filled
- (b) type of fuel transfer pump
- (c) distance to the fuel storage tanks ashore
- (d) size of the fuel storage tanks ashore

If choice a is selected set score to 1.

84. (2.5.12.3.1-1) As its temperature rises, the volume of fuel oil stored in a tank will _____.

- (a) decrease
- (b) increase
- (c) remain the same
- (d) none of the above

If choice b is selected set score to 1.

85. (2.5.12.3.1-4) To determine if all requirements of the Declaration of Inspection are met for oil transfer operations just prior to bunkering from a shore side facility, _____.

- (a) vessel and facility are independently inspected by their respective designated person-in-charge
- (b) vessel and facility must be inspected by a representative of the Coast Guard Captain of the Port
- (c) vessel and facility are jointly and independently inspected by the designated persons-in-charge
- (d) facility is inspected by the designated person-in-charge of the vessel and vice versa for the vessel

If choice c is selected set score to 1.

86. (2.5.12.3.1-6) Why is it important for double bottom fuel oil tanks not to be topped off when loading fuel at cold temperatures?

- (a) Increased viscosity of the product needs higher loading pressure, which increases the chances of a spill.
- (b) A temperature rise of the fuel will cause an overflow from the tank vent.
- (c) Fueling valve may become stuck closed and cause the fuel oil to spill before the valve can be opened.
- (d) Air pockets may cause the fuel to bubble out of the ullage hole.

If choice b is selected set score to 1.

87. (2.5.12.3.1-8) An ullage reading is the distance from a given point at the _____.

- (a) top of the sounding tube down to the surface of the liquid
- (b) top of the liquid down to the tank bottom
- (c) top of the tank down to the bottom of the tank
- (d) sounding tube to either side of the tank

If choice a is selected set score to 1.

88. (2.5.12.3.1-9) As a precaution against oil spills when topping off fuel tanks, you should _____.

- (a) notify the shore pumping station to reduce the pumping rate as tanks near full capacity
- (b) close the deck filling valve to reduce the pumping rate
- (c) fill the tank to the bottom of the expansion trunk
- (d) close all tank vents to prevent overflow

If choice a is selected set score to 1.

89. (2.5.12.3.2-1) Where will you find the procedures for the reporting of oil discharge into the water?

- (a) The vessel's Certificate of Inspection
- (b) The vessel's International Oil Pollution Prevention Certificate
- (c) The vessel's Oil Transfer Procedures
- (d) The vessel's Oil Record Book

If choice c is selected set score to 1.

90. (2.5.12.3.2-2) During oil transfer operations, who would be responsible to guarantee that the posted transfer procedures are being followed?

- (a) The designated person in charge
- (b) The oiler
- (c) The tankerman
- (d) The senior able seaman

If choice a is selected set score to 1.

91. (2.5.12.3.3-2) A method NOT usually allowed for cleaning up oil spills would be the use of _____.

- (a) skimmers
- (b) sawdust
- (c) dispersants
- (d) straw

If choice c is selected set score to 1.

92. (2.5.12.3.3-3) In cleaning up an oil spill, the use of straw or reclaimed paper fibers would be an example of which type of oil removal?

- (a) Mechanical removal
- (b) Chemical agent removal
- (c) Absorbent removal
- (d) None of the above

If choice c is selected set score to 1.

93. (2.5.12.3.3-1) Small oil spills on deck can be prevented from contaminating any waters by _____.

- (a) plugging all scuppers and drains
- (b) regularly emptying all drip pans
- (c) thoroughly draining all bunkering hoses
- (d) placing floating booms around the ship

If choice a is selected set score to 1.

94. (2.5.12.3.4-4) Coast Guard regulations require a shipboard oil pollution emergency plan to be reviewed _____.

- (a) quad-annually only
- (b) annually only
- (c) only one every five years
- (d) biennially only

If choice b is selected set score to 1.

95. (2.5.12.3.4-1) Which of the following is a mandatory section of the shipboard oil pollution emergency plan?

- (a) list of individuals required to respond
- (b) plan exercises
- (c) reporting requirements
- (d) removal equipment list

If choice c is selected set score to 1.

96. (2.5.12.3.4-3) When amendments are made to the shipboard oil pollution emergency plan, all revisions must be submitted to the Coast Guard _____.

- (a) six months prior to the end of the approval period
- (b) one month prior to the anniversary date of the plan
- (c) and can be implemented without immediate approval as long as final approval is received within six months of submittal
- (d) and cannot be implemented without approval

If choice d is selected set score to 1.

97. (2.5.12.3.4-2) Which of the following is NOT required to be provided as part of the appendixes of the Shipboard Oil Pollution Emergency Plan?

- (a) a list which specifies who will be responsible for informing the parties listed and the priority in which they must be notified.
- (b) a list of personnel duty assignments
- (c) a list of agencies or officials in regularly visited ports.
- (d) a list of agencies or officials of Coastal State administrations responsible for receiving and processing incident reports

If choice b is selected set score to 1.

98. (2.5.12.4-3) U.S. flag ships may obtain an Oil Record Book from the _____.

- (a) Environmental Protection Agency
- (b) U.S. Customs Agency
- (c) Local MSO/COTPs/MIO's
- (d) local courthouse

If choice c is selected set score to 1.

99. (2.5.12.4-6) The Oil Record Book for all U.S. ships _____.

- (a) is to be kept in the personal possession of the Master
- (b) is required to have entries recorded within 48 hours of completion of the particular operation
- (c) is the property of the U.S. government
- (d) should not be used to record the accidental discharge of oily or oily mixtures

If choice c is selected set score to 1.

100. (2.5.12.4-1) In the Oil Record Book, a comprehensive list of operational items are grouped into operational sections. Each section is codified by a/an _____.

- (a) letter
- (b) abbreviation
- (c) number
- (d) all of the above

If choice a is selected set score to 1.

101. (2.5.12.4-5) The overall responsibility in maintaining the Oil Record Book is given to _____.

- (a) Master
- (b) Cargo Engineer
- (c) Chief Engineer
- (d) Chief Mate

If choice a is selected set score to 1.

102. (2.5.12.4-7) Each operation involving the transfer of oil or oily mixture that requires an entry in the OIL Record Book shall be fully recorded _____.

- (a) within 24 hours of completion of the project
- (b) within 48 hours of completion of the operation
- (c) without delay
- (d) within 12 hours of completion of the operation

If choice c is selected set score to 1.

103. (2.5.12.4-2) If an incorrect entry were made in the Oil Record Book, you should _____.

- (a) notify the ship's officer-in-charge
- (b) draw a single line through the wrong entry and initial it
- (c) erase the entry and rewrite it
- (d) completely black it out and make the correct entry alongside

If choice b is selected set score to 1.

104. (2.5.12.4-4) Which of the following operations aboard a tanker must be recorded in the Oil Record Book on a tank-to-tank basis according to Coast Guard Regulations?

- (a) The discharge overboard in port or at sea of any bilge water accumulated in machinery spaces.
- (b) The loading or unloading of any or all oil cargo.
- (c) Any internal transfer of oil cargo during a voyage.
- (d) All of the above.

If choice d is selected set score to 1.

105. (2.5.12.5.1-1) A gurgling noise is heard from within a cargo tank when discharging cargo, this would indicate that the _____.

- (a) pump discharge pressure is excessive
- (b) pump is sucking air
- (c) tank foot valve is partially clogged
- (d) tank liquid is too viscous

If choice b is selected set score to 1.

106. (2.5.12.5.3-3) Pressure-vacuum relief valves, as used on tank vessels, are usually set to operate at two points, _____.

- (a) 14.2 psia; 2 psig
- (b) any two points below atmospheric pressure
- (c) 26 inches of vacuum; 5 psig
- (d) any two points above atmospheric pressure

If choice a is selected set score to 1.

107. (2..5.12.5.3-1) Pressure-vacuum relief valves on tank vessel cargo tanks should be kept in good working order to prevent _____.

- (a) oil spillage on deck
- (b) entry of burning substances
- (c) escape of explosive vapors
- (d) damage to tank boundaries

If choice d is selected set score to 1.

108. (2.5.12.5.3-2) Which of the following pressures represents the normal pressure setting of a pressure-vacuum relief valve as normally found on tank vessels?

- (a) 20.7 psia - 14.6 psia
- (b) 22.7 psia - 14.7 psia
- (c) 16.7 psia - 14.2 psia
- (d) 18.7 psia - 14.4 psia

If choice c is selected set score to 1.

109. (2.5.12.5.4-1) Tank stripping is accomplished more effectively by using a _____.

- (a) a multistage centrifugal pump
- (b) a positive displacement pump
- (c) the water displacement method
- (d) the load on top system

If choice b is selected set score to 1.

110. (2.5.12.6.1-1) A Crude Oil Wash (COW) system is considered as _____.

- (a) a cleanup for pump room bilges
- (b) a mechanism which filters and purifies crude oil
- (c) a water operated Butterworth system
- (d) a Butterworth system using crude oil instead of water as the cleaning medium

If choice d is selected set score to 1.

111. (2.5.12.6.1-2) In order for you to operate your vessel's crude oil wash system, the cargo tanks to be washed must be _____.

- (a) opened to the atmosphere for ventilation
- (b) gas free
- (c) full of cargo
- (d) inerted

If choice d is selected set score to 1.

112. (2.5.12.6.1-4) Both crude oil washing and water washing use direct impingement to remove residue from tanks. Crude oil washing has an additional advantage, in utilizing _____.

- (a) a higher temperature
- (b) a higher pressure jet
- (c) the solvent effect of the crude oil
- (d) none of the above.

If choice c is selected set score to 1.

113. (2.5.12.6.1-5) Bottom mounted crude oil washing machines are primarily used for _____.

- (a) all vertical surfaces
- (b) the majority of crude oil tank cleaning
- (c) washing the entire bottom of the tank
- (d) areas where direct impingement from deck mounted machines cannot be satisfactorily reached

If choice d is selected set score to 1.

114. (2.5.12.6.1-6) When tanks have been washed with crude oil, and ballasted without being water rinsed, the ballast is referred to as _____.

- (a) clean ballast
- (b) dirty ballast
- (c) segregated ballast
- (d) dedicated ballast

If choice b is selected set score to 1.

115. (2.5.12.6.1-7) Crude oil washing has which of the following disadvantages?

- (a) It requires following additional work procedures and close attention by the crew during cargo operations.
- (b) Allows buildup of cargo residue on tank walls.
- (c) Its cleaning ability is very poor.
- (d) When completed, more cargo is retained aboard the ship than with water washing.

If choice a is selected set score to 1.

116. (2.5.12.6.1-3) To avoid excessive electrostatic effect in the crude oil washing process, due to the presence of water in the crude oil washing fluid, the contents of any tank to be used as a source of crude oil for washing must first reduce a portion of the tank contents by a vertical height equal to _____.

- (a) one-half meter
- (b) two meters
- (c) one and one-half meters
- (d) one meter

If choice d is selected set score to 1.

117. (2.5.12.6.2-7) When the inert gas system is temporarily unable to maintain a positive pressure, or an oxygen content less than 8%, cargo operations should _____.

- (a) continue only under "Emergency Procedures"
- (b) be shut down immediately
- (c) continue at a slower rate until these requirements are met
- (d) monitored more frequently

If choice b is selected set score to 1.

118. (2.5.12.6.2-1) The component in an inert gas system used for cleaning the gas of solid and sulphur combustion products, while simultaneously cooling the inert gas, is called the _____.

- (a) scrubber
- (b) purifier
- (c) filter
- (d) cooler

If choice a is selected set score to 1.

119. (2.5.12.6.2-2) The blowers of an inert gas generation system aboard a tanker, will be automatically secured if _____.

- (a) normal water supply at the water seal is lost
- (b) the temperature of the inert gas being delivered to the cargo tanks is more than 150°F
- (c) the cooling water supply to the scrubbers is lost
- (d) all of the above

If choice d is selected set score to 1.

120. (2.5.12.6.2-3) How does an inert gas system on a tanker function to prevent explosions in cargo tanks?

- (a) De-energizes the "charged mist" effect.
- (b) Maintains a positive pressure on the vent header to cool the flammable vapors.
- (c) Inert gas dilutes the flammable vapor and air concentrations to keep them below the lower explosive limit.
- (d) Inert gas filters out the flammable vapors from the cargo tank spaces.

If choice c is selected set score to 1.

121. (2.5.12.6.2-4) Each inert gas system must be equipped with the following instruments: oxygen concentration indicator and recorder, pressure indicator and recorder, and temperature indicator. The point of measurement for these instruments must be located _____.

- (a) scrubber outlet
- (b) after the gas regulating valve
- (c) downstream of the blowers
- (d) upstream of the liquid filled breaker

If choice c is selected set score to 1.

122. (2.5.12.6.2-5) Each ship having an inert gas system must have a portable instruments to measure concentrations of hydrocarbon vapor in inert atmospheres and also to measure _____.

- (a) oxygen
- (b) water vapor
- (c) nitrogen
- (d) carbon dioxide

If choice a is selected set score to 1.

123. (2.5.12.6.2-6) Excessive recirculation of inert gas is _____.

- (a) undesirable and it may lead to high oxygen content of the inert gas
- (b) likely to over pressurize the cargo tanks
- (c) likely to overheat the deck water seal
- (d) highly recommended

If choice a is selected set score to 1.

124. (2.5.12.6.2-8) When securing the operation of an inert gas system, the final step should be _____.

- ○ (a) secure the inert gas blower
- • (b) secure the salt water supply to the scrubber
- ○ (c) close the deck isolating valve
- ○ (d) close the flue gas isolating valve

If choice b is selected set score to 1.

125. (2.5.12.6.3-2) "Portable" oil tank cleaning machines are usually provided with a water supply from the _____.

- ○ (a) mucking supply system
- ○ (b) potable water supply
- • (c) fire main
- ○ (d) inert gas scrubber

If choice c is selected set score to 1.

126. (2.5.12.6.3-1) An electrically "charged mist" will be found in a _____.

- ○ (a) diesel engine cylinder
- • (b) cargo tank during Butterworthing
- ○ (c) fuel tank vent outlet
- ○ (d) flash evaporator flash chamber

If choice b is selected set score to 1.

127. (2.5.12.6.3-4) When using portable tank cleaning machines, the hoses may be disconnected when _____.

- ○ (a) the machine is inside the tank
- ○ (b) the hose has been partially drained
- ○ (c) a sailor is standing by the machine
- • (d) the machine is not inside the tank

If choice d is selected set score to 1.

128. (2.5.12.6.3-3) When water washing epoxy-coated cargo tanks, the temperature and pressure of the wash water should generally not exceed _____.

- ○ (a) 160°F - 180 psi
- ○ (b) 212°F - 940 psi
- ○ (c) 180°F - 180 psi
- • (d) 120°F - 120 psi

If choice d is selected set score to 1.

129. (2.5.13.1-4) If additional weight is placed on the main deck of the vessel shown in the illustration _____. SF-0023

- (a) KB will go down
- (b) GM will increase
- (c) G will rise
- (d) K will rise

If choice c is selected set score to 1.

130. (2.5.13.1-1) Reserve buoyancy is the _____.

- (a) unoccupied space below the waterline
- (b) volume of intact space above the waterline
- (c) difference between buoyancy in salt and fresh waters
- (d) excess of the buoyant force over gravitational force

If choice b is selected set score to 1.

131. (2.5.13.1-2) In the absence of external forces, the center of gravity of a floating vessel is located directly above the _____.

- (a) center of flotation
- (b) amidships
- (c) geometric center of the displaced volume
- (d) metacenter

If choice c is selected set score to 1.

132. (2.5.13.1-3) Stability is determined principally by the relationship of the center of gravity and the _____.

- (a) keel
- (b) center of buoyancy
- (c) center of flotation
- (d) aft perpendicular

If choice b is selected set score to 1.

133. (2.5.13.1-5) Clogged limber holes can endanger a ship's stability by _____.

- (a) increasing water area on the keelson
- (b) preventing water from draining to the bilge well
- (c) decreasing off center weight
- (d) preventing the free surface effect

If choice b is selected set score to 1.

134. (2.5.13.1-6) Static water pressure on the hull of a ship is greatest at the _____.

- (a) bow
- (b) stern
- (c) boot topping
- (d) keel

If choice d is selected set score to 1.

135. (2.5.13.1-7) What standard mathematical formula is commonly used to calculate a vessels waterplane area for stability purposes?

- (a) Reynolds Number Rule
- (b) Simpsons Rule
- (c) Pythagorean Rule
- (d) Standard Logarithmic Rule

If choice b is selected set score to 1.

136. (2.5.13.1-8) The weight of the liquid displaced by a vessel floating in sea water is equal to the _____.

- (a) displaced submerged volume
- (b) weight required to sink the vessel
- (c) total weight of the vessel
- (d) reserve buoyancy

If choice c is selected set score to 1.

137. (2.5.13.1-9) If the cause of severe list or trim of a vessel is due to off-center ballast, counter flooding into empty tanks will _____.

- (a) increase list or trim
- (b) increase the righting arm
- (c) increase the righting moment
- (d) decrease list or trim

If choice d is selected set score to 1.

138. (2.5.13.1-10) If the cause of a sudden severe list is due to negative initial stability, counter flooding into empty ballast tanks may _____.

- (a) cause an increase in the righting arm
- (b) bring the unit to an upright equilibrium position
- (c) cause the unit to flop to a greater angle
- (d) increase the righting moment

If choice c is selected set score to 1.

139. (2.5.13.2-1) The symbol shown in the illustration used to represent displacement is _____. SF-0022

- (a) 1
- (b) 2
- (c) 3
- (d) 4

If choice a is selected set score to 1.

140. (2.5.13.2-2) Symbol #3, shown in the illustration, represents _____. SF-0022

- (a) amidships
- (b) baseline
- (c) forward perpendicular
- (d) displacement

If choice a is selected set score to 1.

141. (2.5.13.2-3) The symbol shown in the illustration and is used as the reference from which transverse measurements are made is _____. SF-0022

- (a) 4
- (b) 5
- (c) 3
- (d) 1

If choice b is selected set score to 1.

142. (2.5.13.3-1) The distance between the bottom of the hull and the waterline is called _____.

- (a) freeboard
- (b) reserve buoyancy
- (c) draft
- (d) tonnage

If choice c is selected set score to 1.

143. (2.5.13.3-2) After transferring a weight forward on a vessel, the draft at the center of flotation will _____.

- (a) change, depending on the location of the LCG
- (b) decrease
- (c) increase
- (d) remain the constant

If choice d is selected set score to 1.

144. (2.5.13.3-3) Many uninspected motor vessels require load lines. For the purpose of the Load Line Regulations, the term 'surveyor' means _____.

- (a) any person designated by the American Bureau of Shipping who actually examines the vessel
- (b) an officer of the Coast Guard designated by the Commandant to command all Coast Guard activities within his district
- (c) any person from the Coast Guard who is in charge of a marine inspection zone
- (d) any person from the Coast Guard who performs duties with respect to the inspection, enforcement, and administration of Title 52 of the revised statute

If choice a is selected set score to 1.

145. (2.5.13.4-1) With no environmental forces acting on the vessel, the center of gravity of an inclined vessel is vertically aligned with the _____.

- (a) center of flotation
- (b) original vertical centerline
- (c) metacenter
- (d) longitudinal centerline

If choice b is selected set score to 1.

146. (2.5.13.4-2) A vessel's center of gravity is lowered when the _____.

- (a) freeboard is increased
- (b) tanks are ballasted
- (c) trim is increased
- (d) reserve buoyancy increases

If choice b is selected set score to 1.

147. (2.5.13.4-3) The important stability parameter 'KG' is defined as the _____.

- (a) height of the center of buoyancy above the keel
- (b) height of the center of gravity above the keel
- (c) metacentric height
- (d) height of the metacenter above the keel

If choice b is selected set score to 1.

148. (2.5.13.4-4) The symbol shown in the illustration and used as a reference from which the height of the center of gravity is measured, is item number _____. -SF-0022

- (a) 3
- (b) 5
- (c) 4
- (d) 2

If choice d is selected set score to 1.

149. (2.5.13.5-1) When a vessel is inclined, the tendency for it to return to its original position is caused by the _____.

- ○ (a) upward movement of the center of flotation
- ○ (b) movement of the center of gravity
- ○ (c) increased free surface in the buoyant wedge
- • (d) movement of the center of buoyancy toward the low side of the vessel

If choice d is selected set score to 1.

150. (2.5.13.5-2) The center of volume of the immersed portion of the vessel is the _____.

- ○ (a) metacentric height
- ○ (b) center of gravity
- • (c) center of buoyancy
- ○ (d) center of flotation

If choice c is selected set score to 1.

151. (2.5.13.5-3) The water in which a vessel floats provides vertical upward support. The point through which this support is assumed to act is known as the center of _____.

- ○ (a) effort
- • (b) buoyancy
- ○ (c) gravity
- ○ (d) flotation

If choice b is selected set score to 1.

152. (2.5.13.5-4) Which abbreviation represents the height of the center of buoyancy?

- ○ (a) BM
- ○ (b) CB
- ○ (c) BK
- • (d) KB

If choice d is selected set score to 1.

153. (2.5.13.6-2) A vessel trimmed down by the bow has _____.

- ○ (a) a low mean draft
- ○ (b) a greater draft aft than forward
- ○ (c) zero trim
- • (d) a greater draft forward than aft

If choice d is selected set score to 1.

154. (2.5.13.6-3) The tendency of a ship to resist a change in trim is _____.

- (a) longitudinal stability
- (b) metacentric height
- (c) the righting arm couple
- (d) transverse inclination

If choice a is selected set score to 1.

155. (2.5.13.6-4) In the absence of external forces, adding weight to one side of a floating vessel, will cause the vessel to _____.

- (a) decrease draft at the center of flotation
- (b) list until the center of buoyancy is aligned vertically with the center of gravity
- (c) heel until the angle of loll is reached
- (d) trim to the side opposite TCG until all moments are equal

If choice b is selected set score to 1.

156. (2.5.13.6-5) What effect will transferring fuel oil from #1P double bottom to #3P double bottom have on the trim of a vessel?

- (a) The after draft will decrease.
- (b) The mean draft will decrease.
- (c) The mean draft will increase.
- (d) The forward draft will decrease.

If choice d is selected set score to 1.

157. (2.5.13.6-1) If a vessel rolls to the starboard side, and there are no movable or moving weights onboard, the center of gravity will _____.

- (a) move to starboard
- (b) move to port
- (c) move directly down
- (d) stay in the same position

If choice d is selected set score to 1.

158. (2.5.13.7-1) You may improve a vessel's stability by _____.

- (a) keeping at least one fuel tank empty for slops
- (b) keeping the fuel tanks at least half full
- (c) increasing the free surface effect
- (d) keeping the fuel tanks topped off

If choice d is selected set score to 1.

159. (2.5.13.7-2) Increasing the free surface of a confined liquid has the effect of raising the _____.

- (a) virtual height of the center of gravity
- (b) uncorrected 'KG'
- (c) metacentric height
- (d) metacenter

If choice a is selected set score to 1.

160. (2.5.13.7-3) Excessive free surface occurring in tanks carrying liquid cargo should be avoided in order to _____.

- (a) maintain good stability
- (b) maintain hog and sag
- (c) prevent oil pollution
- (d) all of the above

If choice a is selected set score to 1.

161. (2.5.13.7-4) Adverse effects due to free surface will result when _____.

- (a) the vessel's draft is increased, thus increasing the vessel's wetted surface area
- (b) the vessel is trimmed by the stern
- (c) a portion of liquid is removed from a full tank
- (d) the vessel's draft is decreased exposing more surface area to the wind and current

If choice c is selected set score to 1.

162. (2.5.13.8-1) A vessel which is subjected to 'hogging' _____.

- (a) has its main deck plating under tensile stress
- (b) has its main deck under compressive stress
- (c) has its bottom plating under ductile stress
- (d) has its bottom plate under tensile stress

If choice a is selected set score to 1.

163. (2.5.13.8-2) A vessel having a concentration of weight toward the top of the vessel is said to be _____.

- (a) tender
- (b) stiff
- (c) neutral
- (d) buoyant

If choice a is selected set score to 1.

164. (2.5.13.8-3) What is the usual effect of moving weight from low in the vessel to above the main deck?

- (a) The stability is increased.
- (b) The stability is decreased.
- (c) The draft is increased.
- (d) The reserve buoyancy is decreased.

If choice b is selected set score to 1.

165. (2.5.13.8-4) Which of the listed conditions will occur to the ship's center of gravity if 200 tons of steel is transferred to the ship's cargo hold from shore side?

- (a) The center of gravity will remain in the same position.
- (b) The reserve buoyancy will rise.
- (c) The center of gravity will be lowered.
- (d) The reserve buoyancy will remain the same.

If choice c is selected set score to 1.

166. (2.5.13.9-1) The horizontal fore and aft movement of a vessel is called _____.

- (a) surge
- (b) sway
- (c) heave
- (d) yaw

If choice a is selected set score to 1.

167. (2.5.13.9-2) The vertical motion of a floating vessel is known as _____.

- (a) surge
- (b) pitch
- (c) heave
- (d) sway

If choice c is selected set score to 1.

168. (2.5.13.9-3) The angular movement of a vessel about a horizontal line drawn from its bow to its stern is _____.

- (a) heaving
- (b) pitching
- (c) swaying
- (d) rolling

If choice d is selected set score to 1.

169. (2.5.13.9-4) Pitching is the rising and falling motion of the bow of a ship oscillating about which axis?

- (a) Transverse
- (b) Centerline
- (c) Longitudinal
- (d) Vertical

If choice a is selected set score to 1.

170. (2.5.1.1-1) In a compartment that has been completely flooded, the greatest pressure will be exerted _____.

- (a) at the center of all bulkheads
- (b) along the top of any bulkhead
- (c) on the overhead of the compartment
- (d) along the bottom of any bulkhead

If choice d is selected set score to 1.

171. (2.5.1.2-6) The wooden shoring shown in the illustration is bearing against the hatch coaming and is supporting a load in the direction indicated by the arrows. Which of the following statements is correct for the this condition? SF-0018

- (a) Shore "A" will support the greatest load.
- (b) Shore "A" will not slip under load.
- (c) Shore "B" will support the load without it cracking.
- (d) Shore "B" will crack at the pointed end.

If choice c is selected set score to 1.

172. (2.5.1.2-2) Wooden shoring, with a cross-sectional dimension of 4" X 4" should not be longer than _____.

- (a) 20 feet
- (b) 16 feet
- (c) 10 feet
- (d) 8 feet

If choice c is selected set score to 1.

173. (2.5.1.2-1) A flat block placed under the end of a shore for the purpose of distributing pressure is referred to as a _____.

- (a) strong back
- (b) shole
- (c) shore foot
- (d) butt piece

If choice b is selected set score to 1.

174. (2.5.1.2-4) Which of the methods shown in the illustration is the correct way to fit shoring? SF-0016

- ○ (a) C
- ○ (b) D
- • (c) A
- ○ (d) B

If choice c is selected set score to 1.

175. (2.5.1.2-3) After measuring the length to which a section of shoring should be cut, you should cut the shoring _____.

- ○ (a) approximately 1/2 inch shorter per foot of shoring to allow wet expansion
- • (b) approximately 1/2 inch shorter than measured length to allow for the use of wedges
- ○ (c) approximately 1/2 inch longer than measured length to allow for trimming
- ○ (d) to the same length as the measured length

If choice b is selected set score to 1.

176. (2.5.1.2-5) Wooden shoring is used in shipboard damage control to _____.

- ○ (a) prevent fractures from spreading
- • (b) support a damaged bulkhead in position
- ○ (c) force a warped bulkhead back into its normal position
- ○ (d) force a sprung bulkhead back into place

If choice b is selected set score to 1.

177. (2.5.1.2-7) After an emergency shoring installation has been completed, the _____.

- • (a) shoring should be frequently inspected for looseness
- ○ (b) repair is completed and no further action is needed
- ○ (c) timbers are nailed in place to prevent looseness
- ○ (d) damaged plating should be straightened by heating

If choice a is selected set score to 1.

178. (2.5.1.3-1) Following a grounding, you can best determine that a SLACK fuel oil tank has been holed by _____.

- • (a) sounding the tank
- ○ (b) waiting for the vessel to list
- ○ (c) examining tank boundaries
- ○ (d) checking fuel oil strainers

If choice a is selected set score to 1.

179. (2.5.1.4-2) An acceptable method of temporarily sealing a crack formed in the hull of a vessel is to _____.

- o (a) drill holes at each end
- o (b) shore up the crack with welded braces
- o (c) tack weld a doubler plate over the crack
- • (d) apply a patch of sheet packing backed by a strong back or shoring

If choice d is selected set score to 1.

180. (2.5.1.4-1) It is generally not advisable to drive a wedge into a crack occurring in the hull because wedges _____.

- o (a) will pull through the plating
- o (b) will splinter
- • (c) tend to open the crack
- o (d) will work loose

If choice c is selected set score to 1.

181. (2.5.1.4-3) The wooden plug fitted tightly in the vent of a damaged tank may prevent the tank from _____.

- o (a) collapsing
- o (b) developing free surface moments
- o (c) developing free surfaces
- • (d) filling completely

If choice d is selected set score to 1.

182. (2.5.1.5-1) Your vessel has run aground and upon taking fuel oil tank soundings, you find that a fuel tank level has increased. You therefore should suspect _____.

- o (a) a load of bad fuel
- o (b) contamination from the saltwater flushing system
- o (c) condensation in the fuel tank
- • (d) a crack in the hull portion of the fuel tank

If choice d is selected set score to 1.

183. (2.5.3.1-2) The bypass valve on a self-contained breathing apparatus (SCBA) bypasses _____.

- o (a) a breathing bag containing excessive pressure
- • (b) the regulator in an emergency
- o (c) oxygen to the atmosphere
- o (d) the regenerator in an emergency

If choice b is selected set score to 1.

184. (2.5.3.1-3) Which of the components listed are interchangeable between different backpack self-contained breathing apparatus produced by various manufacturers?

- ○ (a) The face piece
- • (b) The air cylinder
- ○ (c) The regulator
- ○ (d) All of the above

If choice b is selected set score to 1.

185. (2.5.3.1-4) Which of the following conditions represents a particular advantage of using a positive pressure type self-contained breathing apparatus in an atmosphere that is immediately dangerous to life or health?

- ○ (a) The equipment is compact and the wearer can work in confined spaces without difficulty.
- ○ (b) The equipment used is lightweight and easy to wear by reducing physical strain on the wearer.
- ○ (c) The average operating time for most air cylinders is over an hour.
- • (d) The positive pressure in the face piece prevents contaminated air from entering the face piece.

If choice d is selected set score to 1.

186. (2.5.3.1-7) Manufacturers of self contained breathing apparatus use color coded face pieces to indicate different sizes. Which of the following statements is true concerning the colors of SCBA face pieces?

- ○ (a) Size "Large" (standard) is black.
- ○ (b) Size "Extra Large" is red.
- ○ (c) Size "Small" is green.
- • (d) All of the above.

If choice d is selected set score to 1.

187. (2.5.3.1-1) Which of the following limitations is correct regarding gas or filter masks?

- ○ (a) A maximum of only 30 minutes of protection is afforded with a single canister when in atmospheres containing highly toxic gases.
- ○ (b) All canisters must be discarded within 24 hours when the seal becomes broken.
- • (c) A canister is reliable for up to 5 years from the date of manufacture, as long as the seal is unbroken.
- ○ (d) All of the above.

If choice c is selected set score to 1.

188. (2.5.3.2-1) A rigid lifesaving device designed for a group of survivors to hold on to while in the water is defined as a _____.

- ○ (a) life raft
- ○ (b) life cushion
- ○ (c) life preserver
- • (d) buoyant apparatus

If choice d is selected set score to 1.

189. (2.5.3.3-2) Which of the following statements is TRUE concerning lifejackets?

- ○ (a) Buoyant vests may be substituted for lifejackets.
- • (b) Lifejackets are designed to turn an unconscious person's face clear of the water.
- ○ (c) Lifejackets must always be worn with the same side facing outwards to float properly.
- ○ (d) Lightly stained or faded lifejackets will fail in the water and should not be used.

If choice b is selected set score to 1.

190. (2.5.3.3-1) Lifejackets should be stowed in _____.

- ○ (a) the forepeaks
- ○ (b) the pump room
- • (c) readily accessible spaces
- ○ (d) locked watertight containers

If choice c is selected set score to 1.

191. (2.5.3.3-3) Kapok lifejackets require proper care and should NOT be _____.

- ○ (a) stowed near open flame or where smoking is permitted
- ○ (b) used as seats, pillows, or foot rests
- ○ (c) left on open decks
- • (d) all of the above

If choice d is selected set score to 1.

192. (2.5.3.3-4) You are involved in an emergency landing of a helicopter on the water. You should inflate your life jacket _____.

- ○ (a) upon entering the helicopter
- ○ (b) prior to reaching the water
- ○ (c) after reaching the water, but prior to exiting the helicopter
- • (d) after exiting clear of the helicopter

If choice d is selected set score to 1.

193. (2.5.3.4-2) The external flotation bladder on an immersion suit should be inflated _____.

- ○ (a) before you enter the water
- • (b) after you enter the water
- ○ (c) after one hour in the water
- ○ (d) after you notice that your suit is losing buoyancy

If choice b is selected set score to 1.

194. (2.5.3.4-3) Which of the following statements is true concerning an immersion suit and its use?

- ○ (a) Only a light layer of clothing may be worn underneath.
- • (b) They provide sufficient flotation to do away with the necessity of wearing a lifejacket.
- ○ (c) They should be tight fitting.
- ○ (d) A tear in the suit will not appreciably reduce its value.

If choice b is selected set score to 1.

195. (2.5.3.4-1) An immersion suit should be equipped with a/an _____.

- ○ (a) air bottle for breathing
- ○ (b) whistle and handheld flare
- • (c) whistle, strobe light, and reflective tape
- ○ (d) whistle, handheld flare, and sea dye marker

If choice c is selected set score to 1.

196. (2.5.3.5-1) Which of the following is required to be included in the fireman's (emergency) outfit?

- ○ (a) Chemical protection face shield
- ○ (b) Approved work vest
- • (c) Self-contained breathing apparatus
- ○ (d) 5 cell approved flashlight

If choice c is selected set score to 1.

197. (2.5.3.6-1) In the illustration shown, the sea painter is identified as item number _____. SF-0043

- ○ (a) 6
- ○ (b) 3
- • (c) 7
- ○ (d) 9

If choice c is selected set score to 1.

198. (2.5.3.6-3) The hand brake of a lifeboat winch is _____.

- (a) manually disengaged when hoisting a boat
- (b) applied by dropping the counterweighted lever
- (c) controlled by the centrifugal brake mechanism
- (d) automatically engaged if lowering speed is excessive

If choice b is selected set score to 1.

199. (2.5.3.6-5) In order for the automatic lifeboat drain to operate properly _____.

- (a) the cap should be removed to drain the boat when it is waterborne
- (b) the cage must be free of rubbish or the ball may not seat properly
- (c) there is an automatic ball check located in a siphon tube
- (d) the small lever to release the rubber ball float must be turned counterclockwise

If choice b is selected set score to 1.

200. (2.5.3.6-2) When lowering lifeboats as the vessel is pitching in heavy seas, a good practice is to rig frapping lines _____.

- (a) on only the forward falls
- (b) on only the after falls
- (c) fore and aft with a lead of about 45° to the boat
- (d) from the falls to the tricing gear

If choice c is selected set score to 1.

201. (2.5.3.6-4) The purpose of the wire stretched between the lifeboat davit heads is to _____.

- (a) keep the movement of the davits at the same speed
- (b) keep the davits from slipping when they are in the stowed position
- (c) prevent vibration during lowering of the boat
- (d) support the manropes

If choice d is selected set score to 1.

202. (2.5.3.6-6) Your vessel is equipped with totally enclosed lifeboats. Which of the following statements is correct should the boat be enveloped in flames?

- (a) The ventilators will automatically close by the action of fusible links.
- (b) The diesel engine will take its air supply from outside the lifeboat to prevent asphyxiation of the crew.
- (c) A water spay system to cool the outside of the boat is operated by a high-volume manual pump.
- (d) A pressurized air tank will provide approximately ten minutes of air for the survivors and the diesel engine.

If choice d is selected set score to 1.

203. (2.5.3.7-1) In heavy seas the helmsman should steer the survival craft _____.

- (a) into the seas
- (b) broadside to the seas
- (c) in the same direction as the seas
- (d) in a series of figure-eights

If choice a is selected set score to 1.

204. (2.5.3.7-2) When the survival craft is supplied with bottles of compressed air, they are used for _____.

- (a) personnel air supply
- (b) additional flotation
- (c) priming the sprinkler system
- (d) filling the self-righting bags

If choice a is selected set score to 1.

205. (2.5.3.7-5) While retrieving the survival craft, the engine should be stopped _____.

- (a) when the craft clears the water
- (b) when the cable has been attached
- (c) on approach to the platform
- (d) at the embarkation

If choice a is selected set score to 1.

206. (2.5.3.7-4) To activate an air regeneration canister on a survival craft, you _____.

- (a) put it into an container of water
- (b) tear off the tabs on the canister
- (c) turn it upside down
- (d) push 'on' button

If choice b is selected set score to 1.

207. (2.5.3.7-3) When inspecting a survival craft, you should check to make sure that the _____.

- (a) sea anchor is deployed
- (b) hydraulic starting system has been drained
- (c) hydraulic pressure is within the specified range
- (d) steering controls are locked

If choice c is selected set score to 1.

208. (2.5.3.7-8) When collecting condensation for drinking water, _____.

- (a) a sponge used to mop up and store condensation must be kept salt free
- (b) only condensation on the bottom of the canopy should be collected
- (c) it should be strained through a finely woven cloth
- (d) chlorine tablets should be used to make it drinkable

If choice a is selected set score to 1.

209. (2.5.3.7-6) The survival craft engine is fueled with _____.

- (a) kerosene
- (b) unleaded gasoline
- (c) diesel oil
- (d) liquefied gas

If choice c is selected set score to 1.

210. (2.5.3.7-7) Who is responsible for lowering the survival craft?

- (a) Roustabout
- (b) First man aboard
- (c) Last man aboard
- (d) Helmsman

If choice d is selected set score to 1.

211. (2.5.3.8-6) When launching an inflatable life raft, you should make sure that the operating cord is _____.

- (a) fastened to some substantial part of the vessel
- (b) not fastened to anything
- (c) secured to the hydrostatic release
- (d) fastened to the raft container

If choice a is selected set score to 1.

212. (2.5.3.8-7) When personnel are lifted by a helicopter from an inflatable life raft, the personnel on the raft should _____.

- (a) deflate the floor of the raft to reduce the danger of capsizing
- (b) inflate the floor of the raft to provide for additional stability
- (c) remove their lifejackets to prepare for the transfer
- (d) take in the sea anchor to prevent fouling of the rescue sling

If choice a is selected set score to 1.

213. (2.5.3.8-1) If a life raft should capsize, _____.

- (a) climb onto the bottom
- (b) swim away from the raft
- (c) right the raft using the righting straps
- (d) inflate the righting bag

If choice c is selected set score to 1.

214. (2.5.3.8-5) While adrift in an inflatable life raft in hot, tropical weather _____.

- (a) the canopy should be deflated so that it will not block cooling breezes
- (b) the pressure valve may be periodically opened to prevent excessive air pressure
- (c) deflating the floor panels may help to cool personnel
- (d) the entrance curtains should never be opened

If choice c is selected set score to 1.

215. (2.5.3.8-4) The most important reason for taking anti-seasickness pills as soon as possible after entering a life raft is to _____.

- (a) assist in sleeping
- (b) reduce appetite by decreasing nausea
- (c) prevent loss of body moisture by vomiting
- (d) prevent impaired judgment due to motion-induced deliriousness

If choice c is selected set score to 1.

216. (2.5.3.8-9) You are at sea in an inflatable life raft. In high latitudes, the greatest danger is _____.

- (a) collapse of the raft due to cold temperatures
- (b) asphyxiation due to keeping the canopy closed
- (c) hypothermia caused by cold temperature
- (d) starvation

If choice c is selected set score to 1.

217. (2.5.3.8-2) The canopy of your life raft should _____.

- (a) go into place as the raft is inflated
- (b) be put up after everyone is aboard
- (c) be put up only in severe weather
- (d) be used as a sail if the wind is blowing

If choice a is selected set score to 1.

218. (2.5.3.8-3) Using a sea anchor when in a life raft will _____.

- (a) reduce the drift rate of the life raft
- (b) keep the life raft from turning over
- (c) aid in recovering the life raft
- (d) increase your visibility

If choice a is selected set score to 1.

219. (2.5.3.8-8) The painter on a rigid life raft must have a length sufficient to reach the highest waterline plus an additional _____.

- (a) 5 meters (16 feet)
- (b) 10 meters (31 feet)
- (c) 15 meters (50 feet)
- (d) 20 meters (66 feet)

If choice d is selected set score to 1.

220. (2.5.3.9-1) The sea painter on a rescue boat should be led _____.

- (a) forward and outside of all obstructions
- (b) forward and inside of all obstructions
- (c) up and down from the main deck
- (d) to the foremost point on the vessel

If choice a is selected set score to 1.

221. (2.5.3.10-1) Which of the following conditions represents the appropriate time for setting off distress flares and rockets?

- (a) Only when there is a chance of them being seen by rescue vessels.
- (b) At half-hour intervals.
- (c) At one hour intervals.
- (d) Immediately upon abandoning the vessel.

If choice a is selected set score to 1.

222. (2.5.3.10-2) Each vessel in ocean and coastwise service must have an approved EPIRB. An EPIRB _____.

- (a) must be stowed in a manner so that it will float free if the vessel sinks
- (b) must be stowed where it is readily accessible for testing and use
- (c) is a device that transmits a radio signal
- (d) all of the above

If choice d is selected set score to 1.

223. (2.5.3.10-3) You have abandoned ship and after two days in a life raft you can see an aircraft near the horizon apparently carrying out a search pattern. You should _____.

- (a) switch the EPIRB to the homing signal mode
- (b) use the voice transmission capability of the EPIRB to guide the aircraft to your raft
- (c) turn on the strobe light on the top of the EPIRB
- (d) use visual distress signals in conjunction with the EPIRB

If choice d is selected set score to 1.

224. (2.5.5.1-1) A burning mattress is considered as which of the following classes of fire?

- (a) Class "C"
- (b) Class "A"
- (c) Class "B"
- (d) Class "D"

If choice b is selected set score to 1.

225. (2.5.5.1-2) A fire in a pile of dunnage would be classified as a _____.

- (a) class C
- (b) class A
- (c) class D
- (d) class B

If choice b is selected set score to 1.

226. (2.5.5.1-3) A fire involving trash and paper waste would be classified as a _____.

- (a) class C
- (b) class B
- (c) class A
- (d) class D

If choice c is selected set score to 1.

227. (2.5.5.1-4) A fire that has developed in a pile of rubber gasket material would be classified as a _____.

- (a) class B
- (b) class A
- (c) class C
- (d) class D

If choice b is selected set score to 1.

228. (2.5.5.2-2) Which of the fire extinguishing agents listed can be used to effectively combat a class B fire?

- (a) Dry chemical
- (b) Foam
- (c) CO2
- (d) All of the above

If choice d is selected set score to 1.

229. (2.5.5.2-3) The class of fire on which a blanketing effect is essential to extinguish the fire is _____.

- (a) class B
- (b) class C
- (c) class D
- (d) class A

If choice a is selected set score to 1.

230. (2.5.5.2-4) Which of the listed classes of fire would most likely occur in the engine room of a vessel?

- (a) Classes B and C
- (b) Classes A and B
- (c) Classes C and D
- (d) Classes A and D

If choice a is selected set score to 1.

231. (2.5.5.2-1) A class "B" fire develops on the weather deck amidships of moored tank vessel. The fire party should man the _____.

- (a) windward monitor and direct the foam onto a vertical surface while applying water fog to the fire
- (b) windward monitor and direct the foam onto a vertical surface while standing by with a charged hose to protect the monitor operator with water fog if needed
- (c) leeward monitor and direct the foam onto a vertical surface while applying a solid stream of water to wash residual fuel over the side away from the pier
- (d) leeward monitor and direct the foam onto a vertical surface while applying water fog to protect the monitor operator

If choice b is selected set score to 1.

232. (2.5.5.3-1) To fight a class "C" fire, you should use carbon dioxide or _____.

- (a) dry chemical
- (b) chemical foam
- (c) chemically treated saw dust
- (d) mechanical foam

If choice a is selected set score to 1.

233. (2.5.5.3-3) Which of the hazards listed is of a primary concern, other than fire damage, associated with a class C fire?

- (a) Susceptible to reflash
- (b) Electrocution or shock
- (c) Explosion
- (d) Deep seated fire

If choice b is selected set score to 1.

234. (2.5.5.3-2) When combating a class C fire, which of the following dangers may be present?

- (a) Flooding of the vessel
- (b) Water damage to machinery not involved in the fire
- (c) Toxic fumes from burning insulation or electric shock
- (d) Increased surface area of the burning fluid

If choice c is selected set score to 1.

235. (2.5.5.4-1) A class "D" fire would involve the burning of _____.

- (a) diesel oil
- (b) dunnage
- (c) electrical insulation
- (d) magnesium

If choice d is selected set score to 1.

236. (2.5.5.4-2) A magnesium fire would be classified as a _____.

- (a) class D
- (b) class B
- (c) class A
- (d) class C

If choice a is selected set score to 1.

237. (2.5.6.1-6) Which of the following procedures reduces the possibility of an interior ventilation duct fire from rapidly spreading?

- (a) Having a portable CO2 ready at each duct opening.
- (b) Keeping the duct exterior clean.
- (c) Having a fire hose charged at each duct opening.
- (d) Keeping the duct interior clean.

If choice d is selected set score to 1.

238. (2.5.6.1-4) Paints and solvents used aboard a vessel should be _____.

- (a) drained into a common container after each use
- (b) returned to the paint locker after each use
- (c) stowed safely at the work site until work is completed
- (d) covered with a fine mesh screen to protect from ignition sources

If choice b is selected set score to 1.

239. (2.5.6.1-2) When required to work in an area where explosive gases may accumulate, you should use hand tools which are _____. -

- (a) high carbon steel
- (b) approved by the Coast Guard
- (c) fixed with a ferrous cover
- (d) non-ferrous

If choice d is selected set score to 1.

240. (2.5.6.1-5) A simple precaution to reduce the possibility of accidental fires in the paint locker, is to _____.

- (a) label the fixed firefighting system
- (b) store paint cans on metal shelves only
- (c) not allow oily rags to accumulate in the space
- (d) place a portable fire extinguisher immediately outside the locker

If choice c is selected set score to 1.

241. (2.5.6.1-3) Good housekeeping on a vessel prevents fires by _____.

- (a) allowing better access in an emergency
- (b) eliminating potential fuel sources
- (c) eliminating trip hazards
- (d) improving personnel qualifications

If choice b is selected set score to 1.

242. (2.5.6.1-1) The most likely location for a liquid cargo fire to occur on a tanker would be _____.

- (a) in the midships house
- (b) at the main deck manifold
- (c) at the vent header
- (d) in the pump room

If choice d is selected set score to 1.

243. (2.5.6.2-1) In accordance with 46 CFR Part 109, the Muster List ("Station Bill") shows each crew lifeboat station, their duties during abandonment, basic instructions, and _____.

- (a) work schedule
- (b) instructions for lowering the survival capsule
- (c) all emergency signals
- (d) the time each weekly drill will be held

If choice c is selected set score to 1.

244. (2.5.6.3-1) The component shown in the illustration would be installed in which of the following types of fire detection systems? SF-0004

- (a) Line type pneumatic
- (b) Fixed temperature
- (c) Rate-of-rise
- (d) Combined fixed temperature and rate-of-rise

If choice b is selected set score to 1.

245. (2.5.6.3-2) In a typical automatic fire alarm system, all zone circuits are always connected _____.

- (a) to the detecting cabinet
- (b) to the trouble alarm supervising resistor
- (c) in parallel
- (d) in series

If choice a is selected set score to 1.

246. (2.5.6.3-3) Fire detecting systems on merchant vessels may be arranged to sense _____.

- (a) ionized particles
- (b) smoke
- (c) rate of temperature rise
- (d) all of the above

If choice d is selected set score to 1.

247. (2.5.6.4-4) You are part of a search team and have been told that the last sighting of the wiper was next to the fire pump(s). What is the location of the fire pump(s)? Illustration SF-0046

- (a) Machinery space, port side, frame 131
- (b) Auxiliary machinery space, starboard side, frame 104
- (c) Machinery space, starboard side, frame 123
- (d) Machinery space, port side, frame 127

If choice a is selected set score to 1.

248. (2.5.6.4-2) If there was a fire out of control on the Auxiliary Machinery Flat, what fixed extinguishing system in that space would be the best means to extinguish the fire? Illustration SF-0044

- (a) Drenching
- (b) Carbon Dioxide
- (c) Halon
- (d) Water

If choice c is selected set score to 1.

249. (2.5.6.4-3) On the illustrated fire control plan of the lower engine room, the arrow between frames 135 and 140 represents what? Illustration SF-0046

- (a) Direction of fire main
- (b) Primary means of escape
- (c) Secondary means of escape
- (d) Missing person search pattern

If choice b is selected set score to 1.

250. (2.5.6.4-1) What safety information can be found in the fire control plan that is posted or available in booklet form on your ship?

- (a) Particulars of the fire detecting system
- (b) Location of the remote means of stopping fans
- (c) Location of fire doors
- (d) All of the above.

If choice d is selected set score to 1.

251. (2.5.14.1-4) According to Coast Guard Regulations (46 CFR), the fuel tanks of motor-propelled lifeboats shall be _____.

- (a) constructed so as to be completely spill proof
- (b) emptied and gas freed when the ship is dry-docked
- (c) emptied and the fuel changed at least once each year
- (d) hydrostatically tested at each inspection for certification

If choice c is selected set score to 1.

252. (2.5.14.1-1) The device used for preventing the passage of flames into enclosed spaces is called a _____.

- (a) flame arrester
- (b) safety valve
- (c) flame relief valve
- (d) flame stopper

If choice a is selected set score to 1.

253. (2.5.14.1-2) Coast Guard Regulations (46 CFR) require that lifejackets shall be _____.

- (a) provided for each person onboard
- (b) provided for all personnel on watch
- (c) readily accessible to persons in the engine room
- (d) all of the above

If choice d is selected set score to 1.

254. (2.5.14.1-3) In addition to the lifejackets stowed in places that are readily accessible, lifejackets must also be stowed at_____.

- (a) each fire station
- (b) each manned watch station
- (c) the mess room
- (d) each lifeboat

If choice b is selected set score to 1.

255. (2.5.14.1-6) Which statement is TRUE concerning life jackets which are severely damaged?

- (a) They can be repaired by a reliable seamstress.
- (b) They should be replaced.
- (c) They can be used for children.
- (d) They must be tested for buoyancy before being continued in use.

If choice b is selected set score to 1.

256. (2.5.14-1-5) When entering the pump room of a tank vessel to rescue an unconscious person, which items of the equipment listed are you required to be using?

- (a) Protective clothing and explosion-proof flashlight
- (b) Combustible gas indicator and canister gas mask
- (c) Flame safety lamp and resuscitation equipment
- (d) Self-contained breathing apparatus and lifelines

If choice d is selected set score to 1.

257. (2.5.14.2-1) According to 46 CFR Part 76, which of the following statements is true regarding sprinkler heads which are normally activated by the melting of a fusible link?

- (a) Sprinkler heads installed in the galley would have a higher melting point fusible link than those installed in the living spaces.
- (b) Sprinkler heads installed in the galley and living spaces would have the same fusible link melting point.
- (c) None of the above; sprinkler heads with fusible links are prohibited aboard U.S. flag vessels.
- (d) Sprinkler heads installed in the living spaces would have a higher melting point fusible link than those installed in the galley.

If choice a is selected set score to 1.

258. (2.5.14.2-4) The size of the fire hydrant hose connections must be either 1 1/2 inches or _____.

- (a) 3 inches
- (b) 2 1/2 inches
- (c) 1 inch
- (d) 3 1/2 inches

If choice b is selected set score to 1.

259. (2.5.14.2-5) Fire main outlet valves or hydrants located on exposed decks shall be _____.

- (a) opened up and internally examined at each Coast Guard biannual inspection for certification
- (b) protected against freezing or be fitted with cutout valves and drain valves
- (c) behind glass or a suitably marked enclosure
- (d) all of the above

If choice b is selected set score to 1.

260. (2.5.14.2-2) Which of the following statements represents the Coast Guard Regulations (46 CFR) applicable to the equipment required in a fireman's outfit?

- (a) The flashlight must be of an approved three cell fireproof type.
- (b) The assembled lifeline shall have a minimum breaking strength of 1,500 pounds (683.8 kg).
- (c) The combustible gas indicator hose must be 100 feet (30.48 m) in length.
- (d) All protective clothing must be electrically non-conductive.

If choice b is selected set score to 1.

261. (2.5.14.2-3) The lifeline which is part of a fireman's outfit must be _____.

- (a) made of steel or bronze wire rope
- (b) corrosion resistant
- (c) not less than 50 feet in length
- (d) All of the above

If choice d is selected set score to 1.

262. (2.5.14.2-6) Where multiple fire pumps are installed, they may be used for other purposes, provided that one pump is _____.

- (a) capable of being quickly connected to the fire main with a suitable pipe spool
- (b) kept available for use on the fire main at all times
- (c) rated at or above 125 psi
- (d) on line and in operation at all times to the fire main

If choice b is selected set score to 1.

263. (2.5.14.2-7) Coast Guard Regulations (46 CFR) require how many 15 pound carbon dioxide fire extinguishers to be installed in the boiler room of an 8,000 horsepower steam propelled vessel?

- (a) Eight
- (b) Two
- (c) Four
- (d) Six

If choice b is selected set score to 1.

264. (2.5.14.2-8) According to 46 CFR part 95, which of the listed fire extinguishers would be considered hand portable/semi portable and capable of combating a class "B" fire?

- (a) 2.5 gallons of foam
- (b) 35 pounds of carbon dioxide
- (c) 20 pounds of dry chemical
- (d) All of the above

If choice d is selected set score to 1.

265. (2.5.14.3.1-1) If a fixed fire extinguishing system is installed on any vessel, it must be of a type approved by the _____.

- (a) National Fire Protection Association
- (b) U.S. Coast Guard
- (c) Marine Fire Protection Guild
- (d) American Bureau of Shipping

If choice b is selected set score to 1.

266. (2.5.14.3.1-2) When fire detecting systems, fire extinguishing systems, and associated equipment are not required by the Coast Guard but are installed on a cargo vessel at the option of the vessel's owner, they _____.

- (a) need only to be Coast Guard inspected and/or tested after their initial installation
- (b) are exempt from all tests and/or inspections as normally required by a Coast Guard inspector if maintained in a suitable working condition and used only as a back up
- (c) must be removed from the vessel as the only systems allowed and approved are those listed on the Coast Guard Certificate of Inspection
- (d) must also be inspected and/or tested in accordance with Coast Guard Regulations at each Inspection for Certification

If choice d is selected set score to 1.

267. (2.5.14.3.2-3) According to 46 CFR Part 95, which of the following statements is FALSE concerning the regulations pertaining to the carbon dioxide cylinder room for a CO2 fixed fire extinguishing system?

- (a) The compartment shall be clearly identified and marked.
- (b) The compartment must be properly ventilated.
- (c) The door must be kept unlocked.
- (d) The ambient temperature of the room should never be allowed to exceed 130 degrees Fahrenheit.

If choice c is selected set score to 1.

268. (2.5.14.3.2-2) The carbon dioxide cylinders of a fixed fire extinguishing system may be located inside the protected space if the quantity of CO2 required to protect that space is not more than _____.

- (a) 600 pounds
- (b) 500 pounds
- (c) 300 pounds
- (d) 400 pounds

If choice c is selected set score to 1.

269. (2.5.14.3.2-7) Coast Guard Regulations (46 CFR Part 34) state that any space containing charged CO2 cylinders, shall be properly ventilated to prevent a temperature higher than _____.

- (a) 150°F (66.6°C)
- (b) 160°F (71.1°C)
- (c) 140°F (60.0°C)
- (d) 130°F (54.5°C)

If choice d is selected set score to 1.

270. (2.5.14.3.2-8) In accordance with Coast Guard Regulations (46 CFR), which of the following power sources would be acceptable for the carbon dioxide warning alarm?

- ○ (a) The ship's general distribution panel.
- ○ (b) The general alarm power supply storage battery with a nominal potential of not less than 6 volts.
- ○ (c) The emergency lighting and power system via storage batteries or emergency generator.
- • (d) The alarm shall depend on no source of power other than the carbon dioxide.

If choice d is selected set score to 1.

271. (2.5.14.3.2-1) The empty weight of a '100 pound' cylinder in a fixed CO2 fire extinguishing system is 130 pounds. What is the minimum acceptable weight of the cylinder before recharging would be required?

- ○ (a) 210 lbs
- ○ (b) 230 lbs
- ○ (c) 200 lbs
- • (d) 220 lbs

If choice d is selected set score to 1.

272. (2.5.14.3.2-9) According to 46 CFR Part 147, a cylinder used for storing CO2 in a fixed firefighting system must be hydrostatically retested and restamped every _____.

- • (a) 12 years
- ○ (b) 8 years
- ○ (c) once in every calendar year
- ○ (d) 5 years

If choice a is selected set score to 1.

273. (2.5.14.3.2-6) How often must fixed CO2 fire extinguishing systems be inspected to confirm the cylinders are within 10% of the stamped full charge weight?

- ○ (a) Biannually.
- • (b) Annually.
- ○ (c) Semiannually.
- ○ (d) Quarterly.

If choice b is selected set score to 1.

274. (2.5.14.3.2-4) In accordance with 46 CFR Part 95, in a fixed CO2 fire extinguishing system, where provision is made for the release of CO2 by the operation of a remote control, provision is also to be made for releasing the CO2 from _____.

- ○ (a) the engineering control station
- ○ (b) the bridge
- ○ (c) inside the engine room
- • (d) the cylinder location

If choice d is selected set score to 1.

275. (2.5.14.3.2-5) A safety outlet is provided on the CO2 discharge piping to prevent _____.

- (a) rupture of cylinder due to temperature increase
- (b) over pressurization of the CO2 discharge piping
- (c) over pressurization of the space being flooded
- (d) flooding of a space where personnel are present

If choice b is selected set score to 1.

276. (2.5.14.3.3-1) Coast Guard Regulations (46 CFR), require a fixed foam extinguishing system on cargo and miscellaneous vessels to meet which of the following requirements?

- (a) The deck foam system must be completely independent of the fixed foam system.
- (b) The foam producing chemicals must be discharged and recharged every 2 years at the annual inspection.
- (c) The foam producing chemicals must be discharged and recharged every year at annual inspection.
- (d) The supply of foam producing materials must be sufficient to operate the equipment for at least 3 minutes for spaces other than tanks.

If choice d is selected set score to 1.

277. (2.5.14.3.3-2) When the machinery spaces on a tank vessel are protected by a fixed foam extinguishing system, what additional protection is required by Coast Guard Regulations (46 CFR) outside of the machinery space entrance?

- (a) One semi-portable CO2 extinguisher
- (b) Two fire hydrants with hose, nozzle and applicator
- (c) Ten cubic feet of sand of with scoop
- (d) One portable foam extinguisher

If choice b is selected set score to 1.

278. (2.5.14.3.4-1) Coast Guard Regulations (46 CFR) state that where reasonable and practicable, the steam pressure in a steam smothering system should be at least _____.

- (a) 100 psi
- (b) 150 psi
- (c) 125 psi
- (d) equal to one-half boiler working pressure

If choice a is selected set score to 1.

279. (2.5.14.4.1-11) Each completed page of the Oil Record Book must be signed by the _____.

- (a) Chief Mate
- (b) Chief Engineer
- (c) Master
- (d) engineer on watch

If choice c is selected set score to 1.

280. (2.5.14.4.1-1) The Federal Pollution Prevention Regulations (33 CFR) that apply to ships are enforced by the _____.

- (a) Corps of Engineers
- (b) U.S. Coast Guard
- (c) State Pollution Board
- (d) Port Authority

If choice b is selected set score to 1.

281. (2.5.14.4.1-2) According to Pollution Prevention Regulations (33 CFR), the "Discharge of Oil Prohibited" placard is required on all _____.

- (a) U.S. vessels less than 26 feet in length
- (b) U.S. Vessels 26 feet or more in length
- (c) Foreign vessels when engaged in noncommercial service
- (d) foreign vessels not in U.S. navigable waters

If choice b is selected set score to 1.

282. (2.5.14.4.1-4) Some Pollution Prevention Regulations (33 CFR), only apply to "new ships." Under these regulations, a new ship is a ship _____.

- (a) having undergone a major conversion and has been completed before December 31, 1979
- (b) the delivery of which is on or after June 10, 1975
- (c) for which the building contract has been placed after December 31, 1975
- (d) having undergone a major conversion for which the contract was placed between June 30, 1974 and December 31, 1975

If choice c is selected set score to 1.

283. (2.5.14.4.1-5) If a vessel moored at a U.S. terminal does not comply with Coast Guard Pollution Prevention Regulations (33 CFR), it may be detained by the _____.

- (a) state pollution board
- (b) Inspector General
- (c) local port authority
- (d) Captain of the Port

If choice d is selected set score to 1.

284. (2.5.14.4.1-3) Exemption or partial exemption from compliance with any requirement in the Oil or Hazardous Material Pollution Prevention Regulations prescribed in (33 CFR 155) may be granted by the _____.

- (a) Captain of the Port
- (b) OCMI in the vessel's home port
- (c) Commandant of the Coast Guard
- (d) vessel's Chief Engineer

If choice c is selected set score to 1.

285. (2.5.14.4.1-6) Where are "prohibited oil spaces" specified in the Pollution Prevention Regulations (33 CFR)?

- (a) Part 155
- (b) Part 151
- (c) Part 154
- (d) Part 156

If choice a is selected set score to 1.

286. (2.5.14.4.1-10) The Exclusive Economic Zone extends from the baseline of territorial sea of the United States seaward _____ .

- (a) 300 miles
- (b) 100 miles
- (c) 200 miles
- (d) 53 miles

If choice c is selected set score to 1.

287. (2.5.14.4.1-7) The term "oil", as used in the Pollution Prevention Regulations (33 CFR), means _____.

- (a) crude oil only
- (b) liquefied petroleum gas
- (c) petroleum oil of any kind
- (d) fuel oil only

If choice c is selected set score to 1.

288. (2.5.14.4.1-8) The term "oily mixture", as defined in the Pollution Prevention Regulations (33 CFR) includes _____.

- (a) oily ballast water
- (b) bilge slops
- (c) sludge
- (d) all of the above

If choice d is selected set score to 1.

289. (2.5.14.4.1-9) The term "discharge", as it applies to the pollution regulations, means _____.

- (a) spilling
- (b) leaking
- (c) dumping
- (d) all of the above

If choice d is selected set score to 1.

290. (2.5.14.4.2-1) Ocean vessel Ballast Water Management Regulations can be found in _____.

- o (a) 33 CFR Part 110
- o (b) 46 CFR Part 35
- • (c) 33 CFR Part 151
- o (d) 46 CFR Part 56

If choice c is selected set score to 1.

291. (2.5.14.4.2-2) To be in compliance with U.S. Federal Ballast Water Management regulations, which of the following procedures may be followed by an ocean vessel entering U.S. waters returning from an international voyage?

- o (a) Prior to discharging ballast water in U.S. waters, the vessel must perform a complete ballast water exchange in an area no less than 100 nautical miles from any shoreline.
- o (b) Ballast water may only be discharged overboard through an approved oily water separator.
- o (c) Ballast water may only be discharged overboard if the vessel is underway.
- • (d) Prior to entering U.S. waters, a vessel may use any Coast Guard approved alternative environmentally sound method of BWM.

If choice d is selected set score to 1.

292. (2.5.14.4.2-3) To be in compliance with U.S. Federal Ballast Water Management regulations, which of the following procedures may be followed by an ocean vessel entering U.S. waters returning from an international voyage? -

- o (a) Retain ballast water on board the vessel.
- o (b) Prior to discharging ballast water in U.S. waters, the vessel must perform a complete ballast water exchange in an area no less than 200 nautical miles from any shoreline.
- o (c) Prior to entering U.S. waters, use any Coast Guard approved alternative environmentally sound method of BWM.
- • (d) All of the above

If choice d is selected set score to 1.

293. (2.5.14.4.3-2) According to Code of Federal Regulations 33, a vessel operating upon the Great Lakes shall _____.

- o (a) have its forward most frame members sufficiently stiffened to prevent ice damage
- • (b) not discharge any garbage into these waters
- o (c) be required to re-distill all water used for cooling or condensate systems
- o (d) be certified for inland use only

If choice b is selected set score to 1.

294. (2.5.14.4.3-3) When off loading garbage to another ship, your records must identify that ship by name and _____.

- (a) operator's name of record
- (b) home port
- (c) master's name
- (d) official number

If choice d is selected set score to 1.

295. (2.5.14.4.3-4) Which CFR regulation identifies the placard to be posted on the vessel describing the proper disposal of garbage?

- (a) 33 CFR Part 157.37
- (b) 33 CFR Part 159.51
- (c) 33 CFR Part 151.59
- (d) 33 CFR Part 157.100

If choice c is selected set score to 1.

296. (2.5.14.4.3-1) According to Code of Federal Regulations (33 CFR 151), who is responsible for insuring that a ship is not operated unless a waste management plan is utilized?

- (a) Vessel operating company
- (b) Vessel's Master
- (c) Vessel owner
- (d) U.S. Coast Guard

If choice b is selected set score to 1.

297. (2.5.14.4.4-2) A new ocean going ship of 2000 gross tons having an inoperative oily water separator may dispose of its bilge slops by _____.

- (a) pumping them into a settling tank for separation before pumping the oily water residue overboard
- (b) holding its slops onboard until they can be discharged to a shore side reception facility
- (c) circulating them through the lube oil purifier to remove water and debris
- (d) holding its slops onboard until they can be pumped into the city sewer system

If choice b is selected set score to 1.

298. (2.5.14.4.4-4) On a newly constructed oceangoing vessel of 10,000 gross tons, equipped with an approved 100 ppm oily water separator, and bilge monitor, the bilge monitor continuous record must be _____.

- (a) maintained onboard for not less than 3 years
- (b) kept readily available for 1 year only
- (c) detached monthly for enclosure in the Oil Record Book
- (d) initialed after each engineering watch by the watch engineer

If choice a is selected set score to 1.

299. (2.5.14.4.4-3) Bilges may be pumped _____.

- (a) on the outgoing tide
- (b) overboard after dark
- (c) overboard through an oily water separator
- (d) anytime in an emergency, i.e. main engine lube oil failure

If choice c is selected set score to 1.

300. (2.5.14.4.4-1) On U.S. inspected ships, oily water separating equipment, bilge alarms, and bilge monitors must be approved under _____.

- (a) 18 CFR 201
- (b) 33 CFR 151
- (c) 46 CFR 41
- (d) 46 CFR 162

If choice d is selected set score to 1.

301. (2.5.14.4.5-1) Which of the following operations aboard a tanker must be recorded in the Oil Record Book on a tank-to-tank basis according to Coast Guard Regulations?

- (a) The discharge overboard in port or at sea of any bilge water accumulated in machinery spaces.
- (b) The loading or unloading of any or all oil cargo.
- (c) Any internal transfer of oil cargo during a voyage.
- (d) All of the above.

If choice d is selected set score to 1.

302. (2.5.14.4.6-3) According to the Pollution Prevention Regulations (33 CFR), who makes the final decision of when oil transfer may begin?

- ○ (a) The captain of the port
- ○ (b) The senior deck officer present
- • (c) The designated person-in-charge
- ○ (d) Any local Coast Guard representative

If choice c is selected set score to 1.

303. (2.5.14.4.6-2) According to the Pollution Prevention Regulations (33 CFR), no person may transfer oil to or from a vessel unless each person in charge has signed the _____.

- ○ (a) valve inspection record
- ○ (b) certificate of inspection
- ○ (c) oil record book
- • (d) declaration of inspection

If choice d is selected set score to 1.

304. (2.5.14.4.6-6) No person may serve as the person-in-charge of oil transfer operations on more than one vessel at a time _____.

- ○ (a) unless the vessels are moored clear of all docks
- ○ (b) under any circumstances
- • (c) unless authorized by the Captain of the Port
- ○ (d) unless radio communication is set up between the vessels

If choice c is selected set score to 1.

305. (2.5.14.4.6-1) Pollution Prevention Regulations (33 CFR) specify that the person-in-charge of bunkering is responsible for the _____.

- ○ (a) quality of fuel received
- ○ (b) quantity of fuel received
- • (c) communications with terminal operator
- ○ (d) vessel draft

If choice c is selected set score to 1.

306. (2.5.14.4.6-4) The Coast Guard Pollution Prevention Regulations (33 CFR) require a meeting before starting any oil transfer operation. That meeting must be between the _____.

- (a) person-in-charge of the oil transfer operations on the vessel and the person-in-charge of the oil transfer operations at the facility
- (b) master of the vessel and the terminal superintendent
- (c) terminal supervisor, Master of the vessel and the Coast Guard
- (d) master and chief engineer of the vessel and the terminal supervisor

If choice a is selected set score to 1.

307. (2.5.14.4.6-5) According to the Pollution Prevention Regulations (33 CFR), who is to make the final decision of when oil transfer may begin?

- (a) Captain of the Port officer
- (b) The senior deck officer present
- (c) Designated persons-in-charge of vessel and facility
- (d) Any local Coast Guard representative

If choice c is selected set score to 1.

308. (2.5.14.5.1-1) According to 46 CFR, Part 30, a Grade "E" petroleum product is _____.

- (a) kerosene
- (b) a combustible liquid
- (c) a flammable liquid
- (d) light fuel oil

If choice b is selected set score to 1.

309. (2.5.14.5.2-1) According to Coast Guard Regulations (46 CFR), no vessel can come alongside or remain alongside a tank vessel while it is loading A, B, or C grade cargo without having the permission of the _____.

- (a) USCG captain of the port
- (b) tank ship owner
- (c) officer-in-charge of the vessel which is loading
- (d) terminal manager

If choice c is selected set score to 1.

310. (2.5.14.6-4) Which of the following is NOT a MARPOL, Annex V, Special Area?

- (a) Mediterranean Sea
- (b) Black Sea
- (c) Great Lakes
- (d) Red Sea

If choice c is selected set score to 1.

311. (2.5.14.6-5) According to MARPOL, the definition of oil does NOT include _____.

- (a) oil refuse
- (b) crude oil
- (c) cooking oil
- (d) sludge

If choice c is selected set score to 1.

312. (2.5.14.6-1) Which of the circumstances listed is an exception to the garbage discharge requirements in Annex V to MARPOL 73/78?

- (a) A person falls overboard, and a plastic ice chest is thrown for flotation.
- (b) Garbage accumulation onboard has exceeded storage space.
- (c) The garbage to be discharged will sink.
- (d) The destination port or terminal cannot receive garbage.

If choice a is selected set score to 1.

313. (2.5.14.6-3) According to MARPOL, the definition of medical waste does NOT include _____.

- (a) dialysis wastes
- (b) pathological wastes
- (c) expired pharmaceuticals
- (d) sharps

If choice c is selected set score to 1.

314. (2.5.14.6-2) According to MARPOL, the definition of graywater includes drainage from _____. -

- (a) dishwashers
- (b) hospital sinks
- (c) toilets
- (d) cargo spaces

If choice a is selected set score to 1.

315. (2.5.7.3-3) To operate a carbon dioxide extinguisher having the type of head shown in the illustration, you would _____. SF-0008

- (a) open valve and pull pin
- (b) pull pin and open valve
- (c) pull pin, open valve, and pull up on release lever
- (d) open valve, pull pin, and pull up on release lever

If choice b is selected set score to 1.

316. (2.5.7.3-4) Annual servicing of a hand portable CO2 fire extinguisher includes _____.

- (a) inspecting the pressure gauge to ensure the needle is within operating range
- (b) hydrostatic testing of the cylinder
- (c) weighing the cylinder and recharging if weight loss exceeds 10% of the weight of the charge
- (d) discharging, cleaning inside, and recharging

If choice c is selected set score to 1.

317. (2.5.7.3-5) A hand portable CO2 fire extinguisher is effective on burning oil only _____.

- (a) if applied in connection with foam
- (b) to prevent rekindling
- (c) if applied promptly
- (d) if attempts to extinguish the fire with low velocity fog have failed

If choice c is selected set score to 1.

318. (2.5.7.3-6) In a cartridge-operated dry chemical type fire extinguisher, when the CO2 cartridge is activated, the dry chemical is released from the extinguisher _____.

- (a) with the squeeze-grip on/off nozzle at the end of the hose
- (b) with the squeeze grip trigger on top of the container
- (c) by squeezing the control valve carrying handle
- (d) by turning the activating handle on the bottom of the container

If choice a is selected set score to 1.

319. (2.5.7.3-7) Recharging a previously used cartridge-operated dry chemical fire extinguisher is accomplished by _____.

- (a) replacing the propellant cartridge and refilling it with powder
- (b) authorized fire equipment servicing personnel only
- (c) recharging the cartridge and refilling it with powder
- (d) puncturing the cartridge seal after installation

If choice a is selected set score to 1.

320. (2.5.7.3-8) Which of the following statements is true concerning the fire extinguisher shown in the illustration? SF-0006

- (a) The agent may be applied in short bursts by opening and closing the squeeze nozzle piece #1.
- (b) The illustrated extinguisher must never be used in conjunction with water.
- (c) The initial discharge of the extinguisher should be at close range to scatter the burning material.
- (d) There is no danger of reflash in using the illustrated extinguisher on a class B fire.

If choice a is selected set score to 1.

321. (2.5.7.3-1) Which fire extinguisher is most prone to freezing when stowed in low temperatures?

- (a) Halon 1211
- (b) Foam
- (c) Carbon dioxide
- (d) Dry chemical

If choice b is selected set score to 1.

322. (2.5.7.3-2) Which of the following statements is true concerning Halon 1301 fire extinguishing equipment?

- (a) Halon extinguishes the fire by smothering action.
- (b) The agent cannot be used on electrical fires because it leaves a residue.
- (c) The agent is highly toxic at normal room temperature.
- (d) For portable extinguishers, the agent is only available in a 2 pound unit.

If choice d is selected set score to 1.

(2.5.7.4-1) Which of the listed characteristics applies to a semi-portable CO2 system?

- (a) Each cylinder must weigh less than 50 pounds.
- (b) It has a portable hose and nozzle.
- (c) The cylinders are mounted horizontally.
- (d) It has distribution piping installed permanently.

If choice b is selected set score to 1.

323. (2.5.7.4-2) The fire extinguishing equipment shown in the illustration is a large _____. SF-0009

- (a) Halon 1301 hose reel system
- (b) CO2 hose reel system
- (c) light water hose reel system
- (d) dry chemical hose reel system

If choice d is selected set score to 1.

324. (2.5.7.5-6) Fire hoses located at protected fire stations, must always be _____.

- (a) open to the air to prevent rot
- (b) supplied with a smooth bore nozzle
- (c) capped on the ends for protection
- (d) connected to the fire hydrant

If choice d is selected set score to 1.

325. (2.5.7.5-7) When the cotton cover of a fire hose becomes oily or greasy, it should be washed with a solution of mild soapy freshwater and _____.

- (a) a soft-bristled brush
- (b) paint thinner
- (c) a wire brush
- (d) cornstarch

If choice a is selected set score to 1.

326. (2.5.7.5-1) A high velocity fog nozzle will produce the most effective spray pattern when the water pressure is not less than _____.

- (a) 100 psi (689.4 kPa)
- (b) 75 psi (517.0 kPa)
- (c) 35 psi (241.3 kPa)
- (d) 60 psi (413.6 kPa)

If choice a is selected set score to 1.

327. (2.5.7.5-2) The all-purpose, or combination nozzle is capable by itself of producing a solid stream of water _____.

- (a) and low velocity water fog
- (b) only
- (c) and high velocity water fog
- (d) and high and low velocity water fog

If choice c is selected set score to 1.

328. (2.5.7.5-4) Low velocity water fog is used in firefighting as a _____.

- (a) barrier against radiant heat
- (b) smothering agent
- (c) cooling agent
- (d) all of the above

If choice d is selected set score to 1.

329. (2.5.7.5-5) An extinguishing agent which effectively cools, dilutes combustible vapors and provides a heat and smoke screen is _____.

- (a) dry chemical
- (b) carbon dioxide
- (c) Halon 1301
- (d) water fog

If choice d is selected set score to 1.

330. (2.5.7.5-3) A low velocity fog applicator is retained in an all-purpose nozzle by a bayonet joint. The applicator is prevented from rotating in the joint by _____.

- (a) a locknut
- (b) a keeper screw
- (c) a spring-loaded catch
- (d) water pressure

If choice c is selected set score to 1.

1. (3.6.1.1-1) While reviewing emergency response plans onboard your vessel, you have questions regarding the response for damage control conditions and the ship's construction, related to mitigating risks from structural damage. Which of the following sources of information would contain what you are looking for?

- (a) The Safety Of Life At Sea Certificate (SOLAS).
- (b) The Cargo Ship Safety Certificate.
- (c) The Hull and Machinery Certificate.
- (d) The Vessel Stability Booklet.

If choice d is selected set score to 1.

2. (3.6.1.1-2) Your vessel has just been struck by another vessel. As Chief Engineer, after meeting with the Captain and Chief Mate, you have immediately ordered the vessel specific damage control procedures in the vessel's approved stability booklet to be enacted. Which of the following statements is true?

- (a) The Certificate of Documentation issued to the vessel will be the primary reference document in order to calculate free surface corrections.
- (b) The universal station billet assigning crew member responsibilities will provide adequate reference information to determine the adequate damage control response.
- (c) The Safety Management System will provide an IMO standard response for all collision response procedures, including damage control.
- (d) The vessel general arrangement plan would be a critical reference document for your response providing accurate data showing watertight compartments, closures, vents and down flooding angles.

If choice d is selected set score to 1.

3. (3.6.1.2-3) The wooden shoring shown in the illustration is bearing against the hatch coaming and is supporting a load in the direction indicated by the arrows. Which of the following statements is correct for the this condition? SF-0018

- (a) Shore "A" will not slip under load.
- (b) Shore "A" will support the greatest load.
- (c) Shore "B" will support the load without it cracking.
- (d) Shore "B" will crack at the pointed end.

If choice c is selected set score to 1.

4. (3.6.1.2-1) Wooden shoring, with a cross-sectional dimension of 4" X 4" should not be longer than _____.

- (a) 10 feet
- (b) 20 feet
- (c) 8 feet
- (d) 16 feet

If choice a is selected set score to 1.

5. (3.6.1.2-2) Which of the methods shown in the illustration is the correct way to fit shoring? Refer to Illustration SF-0016

- (a) A
- (b) B
- (c) C
- (d) D

If choice a is selected set score to 1.

6. (3.6.1.3-2) Following a grounding, you can best determine that a SLACK fuel oil tank has been holed by _____.

- (a) waiting for the vessel to list
- (b) checking fuel oil strainers
- (c) examining tank boundaries
- (d) sounding the tank

If choice d is selected set score to 1.

7. (3.6.1.3-1) While maneuvering up the East River your vessel runs aground. As the Chief Engineer of the vessel how would you proceed?

- (a) Sound all fuel oil tanks and inspect the engine room bilges and void spaces.
- (b) Switch the salt water cooling suction to the low sea suction.
- (c) Wait until the vessel docks to sound the fuel oil tanks.
- (d) Call your Port Engineer.

If choice a is selected set score to 1.

8. (3.6.1.3-3) Your vessel has run aground and upon taking fuel oil tank soundings, you find that a fuel tank level has increased. You therefore should suspect _____.

- (a) condensation in the fuel tank
- (b) contamination from the saltwater flushing system
- (c) a load of bad fuel
- (d) a crack in the hull portion of the fuel tank

If choice d is selected set score to 1.

9. (3.6.1.4-2) An acceptable method of temporarily sealing a crack formed in the hull of a vessel is to _____.

- (a) drill holes at each end
- (b) shore up the crack with welded braces
- (c) apply a patch of sheet packing backed by a strong back or shoring
- (d) tack weld a doubler plate over the crack

If choice c is selected set score to 1.

10. (3.6.1.4-1) It is generally not advisable to drive a wedge into a crack occurring in the hull because wedges _____.

- (a) will work loose
- (b) tend to open the crack
- (c) will splinter
- (d) will pull through the plating

If choice b is selected set score to 1.

11. (3.6.1.4-3) The wooden plug fitted tightly in the vent of a damaged tank may prevent the tank from _____.

- (a) collapsing
- (b) developing free surface moments
- (c) developing free surfaces
- (d) filling completely

If choice d is selected set score to 1.

12. (3.6.1.5-1) In a compartment that has been completely flooded with water, the greatest pressure will be exerted _____.

- (a) at the vertical center of the bulkhead
- (b) at a point that is one-third from the bottom of the bulkhead
- (c) along the top of the bulkhead
- (d) along the bottom of any bulkhead

If choice d is selected set score to 1.

13. (3.6.1.5-2) Progressive flooding in the engine room may be minimized by securing watertight boundaries and _____.

- (a) evacuating the engine room
- (b) transferring reserve feed water
- (c) pumping out flooded compartments
- (d) dumping fuel oil

If choice c is selected set score to 1.

14. (3.6.1.5-3) Your ship has run aground and it is necessary to determine whether or not a compartment has flooded. Therefore, you should _____.

- (a) open the hatch dogs on the side away from the hinges
- (b) feel the bulkhead to see if it is hot
- (c) tap the bulkhead with a hammer to check for a water level
- (d) open the watertight door and take a quick look

If choice c is selected set score to 1.

15. (3.6.1.5-4) In a compartment that has been completely flooded, the greatest pressure will be exerted _____.

- (a) along the top of any bulkhead
- (b) on the overhead of the compartment
- (c) at the center of all bulkheads
- (d) along the bottom of any bulkhead

If choice d is selected set score to 1.

16. (3.6.3.1-1) What is a major advantage of using a positive pressure type self-contained breathing apparatus?

- (a) Facial hair will not affect the mask performance.
- (b) The equipment is lightweight and the wearer can work without difficulty in confined spaces.
- (c) The average operating time is over an hour.
- (d) The speed with which it can be put into operation is around 45 seconds.

If choice d is selected set score to 1.

17. (3.6.3.1-2) While donning the positive-pressure self-contained breathing apparatus, you discover that the air cylinder pressure gage and the regulator pressure gage differ from each other by 500 psi. Which of the listed action should you consider as appropriate?

- (a) Replace the defective gages with a new pair from the spare parts inventory.
- (b) Replace the air cylinder.
- (c) Take the average of the two gages as the correct pressure.
- (d) Assume that the lower gage reading is correct.

If choice d is selected set score to 1.

18. (3.6.3.1-3) The safe and efficient use of the face piece of a self-contained breathing apparatus is directly influenced by _____.

- (a) the maintenance of the face piece
- (b) the stowing of the face piece
- (c) the donning of the face piece
- (d) all of the above

If choice d is selected set score to 1.

19. (3.6.3.1-4) Prior to entering a compartment containing an atmosphere potentially dangerous to life or health, you should don an approved breathing apparatus. Which of the listed devices would be suitable?

- (a) An SCBA
- (b) A canister-type gas mask.
- (c) An emergency escape hood
- (d) All of the above.

If choice a is selected set score to 1.

20. (3.6.3.1-6) You are instructing new crew members in engine room safety and first aid. You use an example of "One crew member, while working in the engine room, finds another crew member lying unconscious on the deck." What would you instruct the crew do first when faced with the rescue of this crew member?

- o (a) Roll the victim over carefully and check the extent of the injury.
- o (b) Make sure they have all the proper equipment ready.
- o (c) Determine the extent of danger and their ability to cope with it.
- • (d) Make sure they summon help immediately.

If choice d is selected set score to 1.

21. (3.6.3.2-1) Which of the following statements is TRUE concerning lifejackets?

- o (a) Buoyant vests may be substituted for lifejackets.
- • (b) Lifejackets are designed to turn an unconscious person's face clear of the water.
- o (c) Lifejackets must always be worn with the same side facing outwards to float properly.
- o (d) Lightly stained or faded lifejackets will fail in the water and should not be used.

If choice b is selected set score to 1.

22. (3.6.3.3-2) Lifejackets should be stowed in _____.

- o (a) the forepeaks
- o (b) the pump room
- • (c) readily accessible spaces
- o (d) locked watertight containers

If choice c is selected set score to 1.

23. (3.6.3.2-3) Kapok lifejackets require proper care and should NOT be _____.

- o (a) stowed near open flame or where smoking is permitted
- o (b) used as seats, pillows, or foot rests
- o (c) left on open decks
- • (d) all of the above

If choice d is selected set score to 1.

24. (3.6.3.2-4) You are involved in an emergency landing of a helicopter on the water. You should inflate your life jacket _____.

- o (a) upon entering the helicopter
- o (b) prior to reaching the water
- o (c) after reaching the water, but prior to exiting the helicopter
- • (d) after exiting clear of the helicopter

If choice d is selected set score to 1.

25. (3.6.3.2-5) A rigid lifesaving device designed for a group of survivors to hold on to while in the water is defined as a _____.

- (a) life raft
- (b) life cushion
- (c) life preserver
- (d) buoyant apparatus

If choice d is selected set score to 1.

26. (3.6.3.3-1) Which of the following is required to be included in the fireman's (emergency) outfit?

- (a) Chemical protection face shield
- (b) Approved work vest
- (c) Self-contained breathing apparatus
- (d) 5 cell approved flashlight

If choice c is selected set score to 1.

27. (3.6.3.4-3) The external flotation bladder on an immersion suit should be inflated _____.

- (a) before you enter the water
- (b) after you enter the water
- (c) after one hour in the water
- (d) after you notice that your suit is losing buoyancy

If choice b is selected set score to 1.

28. (3.6.3.4-5) Which of the following statements is true concerning an immersion suit and its use?

- (a) Only a light layer of clothing may be worn underneath.
- (b) They provide sufficient flotation to do away with the necessity of wearing a lifejacket.
- (c) They should be tight fitting.
- (d) A tear in the suit will not appreciably reduce its value.

If choice b is selected set score to 1.

29. (3.6.3.4-1) An immersion suit should be equipped with a/an _____.

- (a) air bottle for breathing
- (b) whistle and handheld flare
- (c) whistle, strobe light, and reflective tape
- (d) whistle, handheld flare, and sea dye marker

If choice c is selected set score to 1.

30. (3.6.3.4-2) Which of the following statements concerning immersion suits is correct?

- (a) Suits are not required to automatically turn an unconscious person face-up in the water.
- (b) The immersion suit seals in all body heat and provides protection against hypothermia for weeks.
- (c) The suit is flameproof and provides protection to the wearer while swimming through burning oil.
- (d) The suits provide for limited body movement such as walking, climbing a ladder, and picking up small objects like a pencil.

If choice d is selected set score to 1.

31. (3.6.3.4-4) If for any reason it is necessary to abandon ship while far at sea, it is important for the crew members to _____.

- (a) separate from each other as this will increase the chances of being rescued
- (b) get away from the area because sharks will be attracted to the vessel
- (c) immediately head for the nearest land
- (d) remain together in the area because rescuers will start searching at the vessel's last known position

If choice d is selected set score to 1.

32. (3.6.3.5-10) All personnel should be familiar with the lifeboats _____.

- (a) boarding and operating procedures
- (b) maintenance schedule
- (c) navigational systems
- (d) fuel consumption rates

If choice a is selected set score to 1.

33. (3.6.3.5-13) Which of the lifeboat parts listed must be painted bright red?

- (a) Hatches
- (b) Releasing gear lever
- (c) Boat hooks
- (d) Compass

If choice b is selected set score to 1.

34. (3.6.3.5-7) When using the rainwater collection tubes on a life raft, the FIRST collection should be _____.

- o (a) passed around so all can drink
- • (b) poured overboard because of salt washed off the canopy
- o (c) saved to be used at a later time
- o (d) used to boil food

If choice b is selected set score to 1.

35. (3.6.3.5-1) The purpose of the four water pockets located on the underside of a life raft is to _____.

- o (a) stow rainwater; these four spaces will not take up valuable space
- • (b) act as stabilizers by filling with sea water as soon as raft is inflated and in an upright position
- o (c) hold the freshwater required by regulation to be provided in the raft when packed
- o (d) none of the above

If choice b is selected set score to 1.

36. (3.6.3.5-4) In order to retrieve an inflatable life raft and place it on deck, you should heave on the _____.

- o (a) lifelines
- o (b) righting strap
- o (c) sea anchor
- • (d) towing bridle

If choice d is selected set score to 1.

37. (3.6.3.6-1) A self-righting survival craft will return to an upright position provided that all personnel _____.

- • (a) are seated with seatbelts on and doors shut
- o (b) are seated with seatbelts on and doors open
- o (c) are to shift to one side to right it
- o (d) escape from the craft

If choice a is selected set score to 1.

38. (3.6.3.6-5) Using a sea anchor with the survival craft will _____.

- • (a) reduce your drift rate
- o (b) keep the survival craft from turning over
- o (c) aid in recovering the survival craft
- o (d) increase your visibility

If choice a is selected set score to 1.

39. (3.6.3.6-6) With the sprinkler system and air system on, and all hatches shut, the survival craft will be protected from _____.

- ○ (a) a nuclear environment
- • (b) a fire and toxic environment
- ○ (c) a hurricane
- ○ (d) a drop greater than ten feet

If choice b is selected set score to 1.

40. (3.6.3.6-3) If the survival craft is not loaded to full capacity, the personnel should be _____.

- ○ (a) loaded more on port side to forward
- ○ (b) loaded equally on both sides with more forward
- • (c) loaded equally on both sides with more aft
- ○ (d) allowed to sit anywhere

If choice c is selected set score to 1.

41. (3.6.3.6-8) Provided every effort is used to preserve body moisture content by avoiding perspiration, how long is it normally possible to survive in a survival craft without stored quantities of water?

- ○ (a) Up to 3 days
- • (b) Up to 14 days
- ○ (c) Up to 25 days
- ○ (d) Up to 35 days

If choice b is selected set score to 1.

42. (3.6.3.6-4) When a rescue vessel approaches a survival craft in heavy seas, the person in charge of the survival craft should _____.

- ○ (a) tie up to the rescue vessel
- ○ (b) transfer only those personnel who are not seasick
- • (c) wait for calmer weather before transferring personnel
- ○ (d) transfer all personnel immediately

If choice c is selected set score to 1.

43. (3.6.3.6-2) An 'on-load' release system on a survival craft means the cable can be released _____.

- ○ (a) only when the load is taken off the cable
- ○ (b) only there is a load on the cable
- ○ (c) only when activated by the controls at the lowering station
- • (d) at any time

If choice d is selected set score to 1.

44. (3.6.3.6-7) Seawater may be used for drinking water _____.

- (a) at a maximum rate of two ounces per day
- (b) after mixing with an equal quantity of fresh water
- (c) if gather during or immediately after a hard rain
- (d) under no circumstance

If choice d is selected set score to 1.

45. (3.6.3.7-1) Which of the following conditions represents the appropriate time for setting off distress flares and rockets?

- (a) Only when there is a chance of them being seen by rescue vessels.
- (b) At half-hour intervals.
- (c) At one hour intervals.
- (d) Immediately upon abandoning the vessel.

If choice a is selected set score to 1.

46. (3.6.3.7-2) Each vessel in ocean and coastwise service must have an approved EPIRB. An EPIRB _____.

- (a) must be stowed in a manner so that it will float free if the vessel sinks
- (b) must be stowed where it is readily accessible for testing and use
- (c) is a device that transmits a radio signal
- (d) all of the above

If choice d is selected set score to 1.

47. (3.6.3.7-3) You have abandoned ship and after two days in a life raft you can see an aircraft near the horizon apparently carrying out a search pattern. You should _____.

- (a) switch the EPIRB to the homing signal mode
- (b) use the voice transmission capability of the EPIRB to guide the aircraft to your raft
- (c) turn on the strobe light on the top of the EPIRB
- (d) use visual distress signals in conjunction with the EPIRB

If choice d is selected set score to 1.

48. (3.6.4.1-1) A fire can be extinguished by removing _____.

- (a) the heat
- (b) the fuel
- (c) the oxygen
- (d) any of the above

If choice d is selected set score to 1.

49. (3.6.4.1-3) Except in rare cases, it is impossible to extinguish a shipboard fire by _____.

- (a) removing the fuel
- (b) removing the heat
- (c) interrupting the chain reaction
- (d) removing the oxygen

If choice a is selected set score to 1.

50. (3.6.4.1-5) The blocking open or absence of fire dampers can contribute to _____.

- (a) the accumulation of explosive gases
- (b) faster cooling of the fire
- (c) the fire spreading by way of the ventilation system
- (d) fixed foam systems to be ineffective

If choice c is selected set score to 1.

51. (3.6.4.1-7) A tank has been sealed and unventilated for a long period of time. Which of the following statements is true?

- (a) The tank is safe to enter.
- (b) The tank is especially dangerous to enter.
- (c) Carbon monoxide is present.
- (d) Water vapor present when the tank was sealed has oxidized.

If choice b is selected set score to 1.

52. (3.6.4.1-9) The upper explosive limit (UEL) of a mixture of flammable vapors and air is defined as _____.

- (a) that concentration above which there is just enough flammable vapor to produce an explosion
- (b) that concentration above which the mixture is too rich to burn
- (c) the percentage of flammable vapor by volume in air sufficient to create an explosion
- (d) the percentage of oxygen present in the air sufficient to support combustion

If choice b is selected set score to 1.

53. (3.6.4.2-2) In figure 1 of the illustration, fire would spread to compartment "B" by _____. SF-0013

- (a) impingement
- (b) radiation
- (c) convection
- (d) conduction

If choice d is selected set score to 1.

54. (3.6.4.2-1) It is necessary to cool the bulkheads and decks surrounding a compartment where there is a fire in order to _____.

- ○ (a) cool the metal below its ignition temperature
- ○ (b) form a dense coating of smothering steam
- ○ (c) prevent oxygen from reaching the flames
- • (d) prevent the fire from spreading by the conduction of heat

If choice d is selected set score to 1.

55. (3.6.4.3-3) To prevent the spread of fire by convection you should _____.

- ○ (a) cool the bulkhead around the fire
- ○ (b) shut off electrical power
- • (c) close all openings to the area
- ○ (d) remove combustibles from direct exposure

If choice c is selected set score to 1.

56. (3.6.4.3-1) The spreading of fire as a result of heat being carried through a vessel's ventilation system is an example of heat transfer by _____.

- ○ (a) conduction
- • (b) convection
- ○ (c) radiation
- ○ (d) windage

If choice b is selected set score to 1.

57. (3.6.4.3-2) In the event of a fire, the doors to a stair tower must be closed to prevent the spread of fire by_____.

- • (a) convection
- ○ (b) conduction
- ○ (c) radiation
- ○ (d) ventilation

If choice a is selected set score to 1.

58. (3.6.4.4-1) Radiation can cause a fire to spread by _____.

- ○ (a) transmitting the heat of a fire through the ship's metal
- ○ (b) burning liquids flowing into another space
- ○ (c) heated gases flowing through ventilation systems
- • (d) the transfer of heat across an unobstructed space

If choice d is selected set score to 1.

59. (3.6.4.6-1) Through which of the listed processes is sufficient heat produced to cause spontaneous ignition?

- o (a) Aeration
- o (b) Anaerobic decomposition
- o (c) Putrefaction
- • (d) Oxidation

If choice d is selected set score to 1.

60. (3.6.4.6-2) The process that occurs when heat is generated by a chemical reaction within a substance and continues to a point of ignition is known as _____.

- • (a) spontaneous combustion
- o (b) radiation ignition
- o (c) chemical ignition
- o (d) chemical combustion

If choice a is selected set score to 1.

61. (3.6.4.6-3) Hazardous conditions exist which may result in spontaneous combustion when _____.

- o (a) dry metal turnings accumulate
- • (b) oil soaked rags are stowed in the machine shop
- o (c) powdered aluminum is stowed dry
- o (d) all of the above

If choice b is selected set score to 1.

62. (3.6.4.6-4) To prevent oily rags from spontaneously igniting they should be _____.

- • (a) discarded as soon as possible
- o (b) cleaned thoroughly for reuse
- o (c) kept in the paint locker
- o (d) kept in nonmetal containers

If choice a is selected set score to 1.

63. (3.6.5.1-2) If the items shown in the illustration are burning, this fire would be a Class _____. SF-0001

- • (a) "A"
- o (b) "D"
- o (c) "B"
- o (d) "C"

If choice a is selected set score to 1.

64. (3.6.5.1-1) A fire in a pile of canvas would be classified as a _____.

- (a) class C
- (b) class A
- (c) class B
- (d) class D

If choice b is selected set score to 1.

65. (3.6.5.1-3) Burning wood is considered to be which of the listed classes of fire?

- (a) Class B
- (b) Class C
- (c) Class D
- (d) Class A

If choice d is selected set score to 1.

66. (3.6.5.1-4) You are conducting training on fire fighting procedures. What type of fire is characterized by the burning of ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance?

- (a) Type A
- (b) Type C
- (c) Type B
- (d) Type D

If choice a is selected set score to 1.

67. (3.6.5.1-5) A Type A fire has been reported onboard your vessel. What type of materials would your fire teams expect to find at the scene?

- (a) Electrical equipment where the use of nonconducting extinguishing agent is of first importance
- (b) Ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance
- (c) Metals
- (d) Flammable liquids, greases, etc., where a blanketing effect is essential

If choice b is selected set score to 1.

68. (3.6.5.2-1) A fire in the paint locker would probably be _____.

- (a) Class D
- (b) Class B
- (c) Class A
- (d) Class C

If choice b is selected set score to 1.

69. (3.6.5.2-2) A galley grease fire would be classified as _____.

- (a) Class A
- (b) Class C
- (c) Class D
- (d) Class B

If choice d is selected set score to 1.

70. (3.6.5.2-3) Burning diesel oil should be treated as which class of fire?

- (a) Class "D"
- (b) Class "B"
- (c) Class "A"
- (d) Class "C"

If choice b is selected set score to 1.

71. (3.6.5.2-4) You are conducting training on fire fighting procedures. What type of fire is characterized by the burning of flammable liquids, greases, etc., where a blanketing effect is essential?

- (a) Type A
- (b) Type C
- (c) Type D
- (d) Type B

If choice d is selected set score to 1.

72. (3.6.5.2-5) A Type B fire has been reported onboard your vessel. What type of materials would your fire teams expect to find at the scene?

- (a) Flammable liquids, greases, etc., where a blanketing effect is essential
- (b) Electrical equipment where the use of nonconducting extinguishing agent is of first importance
- (c) Metals
- (d) Ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance

If choice a is selected set score to 1.

73. (3.6.5.3-3) Which of the hazards listed is of a primary concern, other than fire damage, associated with a class C fire?

- (a) Deep seated fire
- (b) Explosion
- (c) Electrocution or shock
- (d) Susceptible to reflash

If choice c is selected set score to 1.

74. (3.6.5.3-1) A fire, occurring in the windings, of an overloaded electrical motor, is considered a _____.

- (a) class "B" fire
- (b) class "C" fire
- (c) class "A" fire
- (d) class "D" fire

If choice b is selected set score to 1.

75. (3.6.5.3-2) Class C fires may be combated using a _____.

- (a) Halon extinguisher
- (b) carbon dioxide extinguisher
- (c) dry chemical extinguisher
- (d) all of the above

If choice d is selected set score to 1.

76. (3.6.5.3-4) You are conducting training on fire fighting procedures. What type of fire is characterized by the burning of electrical equipment where the use of nonconducting extinguishing agent is of first importance?

- (a) Type C
- (b) Type B
- (c) Type D
- (d) Type A

If choice a is selected set score to 1.

77. (3.6.5.3-5) A Type C fire has been reported onboard your vessel. What type of materials would your fire teams expect to find at the scene?

- (a) Electrical equipment where the use of nonconducting extinguishing agent is of first importance
- (b) Flammable liquids, greases, etc., where a blanketing effect is essential
- (c) Metals
- (d) Ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance

If choice a is selected set score to 1.

78. (3.6.5.4-1) A class "D" fire would involve the burning of _____.

- (a) electrical insulation
- (b) dunnage
- (c) magnesium
- (d) diesel oil

If choice c is selected set score to 1.

79. (3.6.5.4-4) "Dry Powder" fire extinguishers, which contain a mixture of graphite and sodium chloride as the extinguishing agent, are generally used to fight which type of fire?

- ○ (a) Class B
- ○ (b) Class C
- • (c) Class D
- ○ (d) all of the above

If choice c is selected set score to 1.

80. (3.6.5.4-2) A fire involving aluminum powder would be a class _____.

- ○ (a) "C" fire
- • (b) "D" fire
- ○ (c) "B" fire
- ○ (d) "A" fire

If choice b is selected set score to 1.

81. (3.6.5.4-3) A magnesium fire would be classified as a _____.

- ○ (a) class A
- ○ (b) class C
- ○ (c) class B
- • (d) class D

If choice d is selected set score to 1.

82. (3.6.6.1-6) Which of the following procedures reduces the possibility of an interior ventilation duct fire from rapidly spreading?

- ○ (a) Having a fire hose charged at each duct opening.
- • (b) Keeping the duct interior clean.
- ○ (c) Having a portable CO2 ready at each duct opening.
- ○ (d) Keeping the duct exterior clean.

If choice b is selected set score to 1.

83. (3.6.6.1-4) Paints and solvents used aboard a vessel should be _____.

- ○ (a) covered with a fine mesh screen to protect from ignition sources
- • (b) returned to the paint locker after each use
- ○ (c) stowed safely at the work site until work is completed
- ○ (d) drained into a common container after each use

If choice b is selected set score to 1.

84. (3.6.6.1-2) When required to work in an area where explosive gases may accumulate, you should use hand tools which are _____. -

- (a) approved by the Coast Guard
- (b) non-ferrous
- (c) high carbon steel
- (d) fixed with a ferrous cover

If choice b is selected set score to 1.

85. (3.6.6.1-5) A simple precaution to reduce the possibility of accidental fires in the paint locker is to _____.

- (a) label the fixed firefighting system
- (b) store paint cans on metal shelves only
- (c) not allow oily rags to accumulate in the space
- (d) place a portable fire extinguisher immediately outside the locker

If choice c is selected set score to 1.

86. (3.6.6.1-3) Good housekeeping on a vessel prevents fires by _____.

- (a) allowing better access in an emergency
- (b) eliminating potential fuel sources
- (c) eliminating trip hazards
- (d) improving personnel qualifications

If choice b is selected set score to 1.

87. (3.6.6.1-1) The most likely location for a liquid cargo fire to occur on a tanker would be _____.

- (a) in the midships house
- (b) at the main deck manifold
- (c) at the vent header
- (d) in the pump room

If choice d is selected set score to 1.

88. (3.6.6.2-1) In accordance with 46 CFR Part 109, the Muster List ("Station Bill") shows each crew lifeboat station, their duties during abandonment, basic instructions, and _____.

- (a) instructions for lowering the survival capsule
- (b) all emergency signals
- (c) work schedule
- (d) the time each weekly drill will be held

If choice b is selected set score to 1.

89. (3.6.6.2-2) You are reviewing emergency procedures with new crew members. How would you direct them to proceed if they hear the fire and emergency signal on the ship's general alarm or whistle?

- (a) Report to the Bridge and wait further instructions.
- (b) Report to their state room and wait further instructions.
- (c) Report to their assigned duty station as posted on the Station Bill, so an accurate muster can be taken.
- (d) Report directly to the scene of the emergency to help.

If choice c is selected set score to 1.

90. (3.6.6.2-3) As Chief Engineer, you are discussing with a new Third Engineer the methods of fighting an engine room fire. You ask the junior engineer to explain how to proceed in the event of an engine room fire when you cannot gain entry to the control room. Which of the following should be included in the junior engineer's response?

- (a) Open the steam smothering to the main engine.
- (b) Secure the ventilation and allow the fire to burn itself out.
- (c) Immediately dump the fixed CO2 system without securing the ventilation.
- (d) Secure the fuel pumps and ventilation from the emergency station outside the engine room.

If choice d is selected set score to 1.

91. (3.6.6.2-4) As Chief Engineer, you are discussing fire safety with a new unlicensed crew member. What would you expect the crew member to know having been onboard the vessel for two days?

- (a) The starting procedures for the ship's fire pump.
- (b) Ship's signals for fire and emergency and abandon ship.
- (c) The procedures to secure the fire detection system.
- (d) The release procedures for the low pressure CO2 system.

If choice b is selected set score to 1.

92. (3.6.6.2-5) Your ship is leaving port after almost a complete crew change out. The captain has ordered a fire drill simulating a fire in the engine room with full emergency gear and all hoses run out. What is the reason for drilling with this kind of simulation?

- (a) It provides a quick method to inventory all of the fire fighting gear.
- (b) The World Health Organization requires crews to get regular exercise in the form of fire drills.
- (c) This ensures that your crew is prepared to combat a ship board fire using ship's equipment.
- (d) Regulations require a full fire drill when more than half the crew changes out.

If choice c is selected set score to 1.

93. (3.6.6.2-6) How would you ensure that your crew is prepared to combat a ship board fire using ship's equipment?

- (a) Have them read a fire fighting text book.
- (b) Check training records, to see if crew members have attended a fire fighting training course.
- (c) Conduct required drills, simulating fire conditions and training with ship's equipment.
- (d) Show crew generic fire training videos.

If choice c is selected set score to 1.

94. (3.6.6.3-1) The component shown in the illustration would be installed in which of the following types of fire detection systems? See Illustration SF-0004

- (a) Fixed temperature
- (b) Line type pneumatic
- (c) Combined fixed temperature and rate-of-rise
- (d) Rate-of-rise

If choice a is selected set score to 1.

95. (3.6.6.3-2) In a typical automatic fire alarm system, all zone circuits are always connected _____.

- (a) in parallel
- (b) to the trouble alarm supervising resistor
- (c) in series
- (d) to the detecting cabinet

If choice d is selected set score to 1.

96. (3.6.6.3-3) Fire detecting systems on merchant vessels may be arranged to sense _____.

- (a) ionized particles
- (b) smoke
- (c) rate of temperature rise
- (d) all of the above

If choice d is selected set score to 1.

97. (3.6.6.4-5) In reviewing ship drawings with a new junior office you note that some divisional bulkheads are labeled A60. In the discussion with the junior officer, what should be noted is indicated by the label A60?

- (a) Fire division boundary, A Class, with insulation that will limit temperature rise below the allowable level for 60 seconds.
- (b) Damage stability bulkhead, A Class, with bulkhead strength that will limit flooding for 60 minutes.
- (c) Fire division boundary, A Class, with insulation that will limit temperature rise below the allowable level for 60 minutes.
- (d) Materials meeting construction yard specification A60.

If choice c is selected set score to 1.

98. (3.6.6.4-6) During repairs it is necessary to replace existing vessel bulkhead. Drawings indicate the bulkhead is A60. "A" indicates which of the following?

- (a) "A" class bulkheads must not allow flame or smoke passage for 30 minutes when subjected to a fire test
- (b) "A" class bulkheads must not allow flame or smoke passage for 15 minutes when subjected to a fire test
- (c) "A" class bulkheads must not allow flame or smoke passage for 120 minutes when subjected to a fire test
- (d) "A" class bulkheads must not allow flame or smoke passage for 60 minutes when subjected to a fire test

If choice d is selected set score to 1.

99. (3.6.6.4-7) During repairs it is necessary to replace an existing vessel bulkhead. Drawings indicate it is a "B" class bulkhead. This indicates which of the following?

- (a) "B" class bulkheads must not allow flame passage for 60 minutes when subjected to a fire test.
- (b) "B" class bulkheads must not allow flame passage for 30 minutes when subjected to a fire test.
- (c) "B" class bulkheads must not allow flame passage for 120 minutes when subjected to a fire test.
- (d) "B" class bulkheads must not allow flame or smoke passage for 15 minutes when subjected to a fire test.

If choice b is selected set score to 1.

100. (3.6.6.4-8) Drawings of your deck plans show the use of a A60 bulkheads. "A" indicates which of the following?

- (a) "A" class bulkheads must not allow flame or smoke passage for 15 minutes when subjected to a fire test
- (b) "A" class bulkheads must not allow flame or smoke passage for 60 minutes when subjected to a fire test
- (c) "A" class bulkheads must not allow flame or smoke passage for 120 minutes when subjected to a fire test
- (d) "A" class bulkheads must not allow flame or smoke passage for 30 minutes when subjected to a fire test

If choice b is selected set score to 1.

101. (3.6.6.4-9) Drawings of your ship indicate the use of "B" class bulkheads. The "B" indicates which of the following?

- (a) "B" class bulkheads must not allow flame passage for 60 minutes when subjected to a fire test.
- (b) "B" class bulkheads must not allow flame or smoke passage for 15 minutes when subjected to a fire test.
- (c) "B" class bulkheads must not allow flame passage for 120 minutes when subjected to a fire test.
- (d) "B" class bulkheads must not allow flame passage for 30 minutes when subjected to a fire test.

If choice d is selected set score to 1.

102. (3.6.6.4-10) In preparation for an extended yard period, you are reviewing your ship's plans. You notice several bulkheads are labeled A60. What is indicated by the label A60?

- (a) Materials meeting construction yard specification A60.
- (b) Damage stability bulkhead, A Class, with bulkhead strength that will limit flooding for 60 minutes.
- (c) Fire division boundary, A Class, with insulation that will limit temperature rise below the allowable level for 60 seconds.
- (d) Fire division boundary, A Class, with insulation that will limit temperature rise below the allowable level for 60 minutes.

If choice d is selected set score to 1.

103. (3.6.7.1-4) One of the disadvantages of using carbon dioxide to extinguish a fire in an enclosed space is _____.

- (a) the CO2 gas is lighter than air and a large amount is required to extinguish a fire near the deck
- (b) rapid dissipation of the CO2 vapor
- (c) the 'snow' which is sometimes discharged along with the gas is toxic
- (d) prolonged exposure to high concentrations of CO2 gas causes suffocation

If choice d is selected set score to 1.

104. (3.6.7.1-2) When an oil fire has been extinguished, the surface of the oil should be kept covered with foam to prevent _____.

- (a) spontaneous combustion below the oil surface
- (b) air from contacting the oil vapors permitting reignition
- (c) toxic fumes from escaping to the surface
- (d) boiling of the heated oil

If choice b is selected set score to 1.

105. (3.6.7.1-3) The principle personnel hazard unique to Halon fire extinguishers is _____.

- (a) skin irritation
- (b) displacement of oxygen
- (c) eye irritation produced immediately after discharge from cylinder
- (d) inhaling toxic vapors produced when exposed directly to a flame for extended periods

If choice d is selected set score to 1.

106. (3.6.7.1-1) The most common cooling agent used for fighting fires on tank vessels is _____.

- (a) steam smothering
- (b) flue gas
- (c) water
- (d) carbon dioxide

If choice c is selected set score to 1.

107. (3.6.7.1-5) Which extinguishing agent is the best for use on electrical fires?

- (a) Water fog
- (b) CO2
- (c) Dry Chemical
- (d) Foam

If choice b is selected set score to 1.

108. (3.6.7.2-1) A three inch overboard discharge line, located six feet below the waterline, has ruptured and separated from the hull. What would be the minimum number of strokes per minute required from a 10" x 8" x 12" duplex double acting reciprocating bilge pump, operating at 96% efficiency, to keep the bilge water level from continuing to rise? See Illustration SF-0034

- (a) 87 strokes per minute
- (b) 56 strokes per minute
- (c) 98 strokes per minute
- (d) 45 strokes per minute

If choice a is selected set score to 1.

109. (3.6.7.2-2) Your chemical tanker was built to the IBC Code and has foam as the main fire fighting medium. During one of your safety meetings you review the properties of foam as an extinguishing agent. Which of the following is a correct statement that would be appropriate to share during the meeting?

- (a) Foam will blanket the fire and cut off the supply of oxygen but it does not provide the best cooling protection for the firefighters.
- (b) Foam will blanket the fire and cut off the supply of oxygen and it also provides excellent cooling protection for the firefighters.
- (c) Foam will blanket the fire and cut off the supply of oxygen and is therefore perfectly suited to A, B and C class fires.
- (d) Foam will blanket the fire and cut off the supply of oxygen but it does generate toxic vapors that may harm the firefighters.

If choice a is selected set score to 1.

110. (3.6.7.3-3) Which portable fire extinguisher is normally recharged in a shore facility?

- (a) Water (cartridge-operated)
- (b) Dry chemical (cartridge-operated)
- (c) Carbon dioxide
- (d) Water (pump tank)

If choice c is selected set score to 1.

111. (3.6.7.3-5) The state of charge of a stored pressure type dry chemical fire extinguisher can be readily determined by _____.

- (a) visual inspection of the pressure gage
- (b) removing the lid and checking the level of dry chemical
- (c) weighing the CO2 cartridge
- (d) weighing the cylinder

If choice a is selected set score to 1.

112. (3.6.7.3-7) During an inspection of a ships storeroom, you find sealed containers of chemicals labeled "potassium bicarbonate" and "potassium chloride". These chemicals are most commonly used aboard ship for _____.

- (a) recharging dry chemical fire extinguishers
- (b) degreasing machinery parts
- (c) engine jacket water treatment
- (d) descalling evaporator tubes

If choice a is selected set score to 1.

113. (3.6.7.3-1) To activate a foam type portable fire extinguisher, you must _____.

- (a) turn the extinguisher upside down
- (b) pull the pin and squeeze the grips
- (c) pump the hand lever for pressure
- (d) strike the bottom of the extinguisher against the deck

If choice a is selected set score to 1.

114. (3.6.7.3-2) The passive safety device installed on each Halon fire extinguishing cylinder, to prevent its over pressurization is called a _____.

- (a) relief valve
- (b) rupture disc
- (c) control head
- (d) safety valve

If choice b is selected set score to 1.

115. (3.6.7.4-1) Which of the listed characteristics applies to a semi-portable CO2 system?

- (a) It has a portable hose and nozzle.
- (b) The cylinders are mounted horizontally.
- (c) It has distribution piping installed permanently.
- (d) Each cylinder must weigh less than 50 pounds.

If choice a is selected set score to 1.

116. (3.6.7.4-2) The fire extinguishing equipment shown in the illustration is a large _____. See Illustration SF-0009

- (a) Halon 1301 hose reel system
- (b) CO2 hose reel system
- (c) light water hose reel system
- (d) dry chemical hose reel system

If choice d is selected set score to 1.

117. (3.6.7.5-5) Properly stowed fire hose is either faked or rolled into a rack with the _____.

- (a) male and female ends connected together to prevent damage
- (b) female end available to be quickly connected to the hydrant
- (c) male end attached to the adjacent fire hydrant
- (d) nozzle end arranged to be easily run out to the fire

If choice d is selected set score to 1.

118. (3.6.7.5-7) There is always a lower water pressure at the fire hose outlet than is found at the discharge of the pump. Which of the following reasons is the common cause of this loss in pressure?

- (a) Friction in the piping and valves
- (b) Wear in the hydrant
- (c) Leaky pilot valve
- (d) Leaky pump suction valve

If choice a is selected set score to 1.

119. (3.6.7.5-3) The physical difference of the water spray patterns developed by the high velocity tip and low velocity applicator is due to _____.

- (a) the method of breaking up the water stream
- (b) the type of fire being fought
- (c) the capacity of the fire pump
- (d) a difference in water pressure

If choice a is selected set score to 1.

120. (3.6.7.5-1) A low velocity fog applicator is held in an all-purpose nozzle by a bayonet joint. The applicator is prevented from rotating in the joint by _____.

- (a) a keeper screw
- (b) water pressure
- (c) a locknut
- (d) a spring-loaded catch

If choice d is selected set score to 1.

121. (3.6.7.5-4) Water applied as a 'fog' can be more effective than water applied as a 'solid stream', because _____.

- (a) it reduces the total amount of water that must be pumped into the ship to fight a given fire
- (b) a given amount of water can absorb more heat when it is in the form of fog
- (c) it does not have to hit the seat of fire to be effective
- (d) of all of the above

If choice d is selected set score to 1.

122. (3.6.7.6-3) Actuating the fixed CO2 system should cause the automatic shutdown of the _____.

- (a) fuel supply only
- (b) exhaust ventilation only
- (c) mechanical and natural ventilation
- (d) supply and exhaust ventilation

If choice d is selected set score to 1.

123. (3.6.7.6-4) What would be a major consequence of allowing the refrigeration system of a low pressure fixed CO2 fire extinguishing system to remain inoperable?

- (a) The warmed charge of CO2 would not be effective in extinguishing a fire.
- (b) Excessive condensation inside the tank would freeze causing a restriction in the discharge piping.
- (c) Liquid CO2 would overflow from the tank through the drain line as the temperature increased.
- (d) The entire charge may eventually be lost due to CO2 boil-off venting through the relief valve.

If choice d is selected set score to 1.

124. (3.6.7.6-5) Why is it essential to introduce CO2 from a fixed fire extinguishing system, into a large engine room, as quickly as possible?

- (a) To keep the fire from spreading through the bulkheads.
- (b) Updraft from the fire tends to carry the CO2 away.
- (c) Carbon dioxide takes a long time to disperse to all portions of a space.
- (d) The fire may warp the CO2 piping.

If choice b is selected set score to 1.

125. (3.6.7.6-1) The primary function of an automatic sprinkler system is to _____.

- (a) instantaneously extinguish the fire which triggered it
- (b) protect people in the areas which have had sprinkler heads installed
- (c) limit the spread of the fire and control the amount of heat produced
- (d) alert the crew to the fire

If choice c is selected set score to 1.

126. (3.6.7.6-5) During vessel familiarization, you find the vessel you are newly assigned to as Chief Engineer has a high pressure CO2 system for the engine room. In what way are the high pressure CO2 bottle released in the event of an engine room fire?

- (a) The master cylinder sends gas to the actuators on all bottles in the affected banks.
- (b) The bottles are released individually.
- (c) The pull wire releases all bottles in the banks.
- (d) The smoke detection system automatically releases CO2 to the engine room.

If choice a is selected set score to 1.

127. (3.6.7.7-1) In discussing with a new junior officer the provisions aboard the vessel for shore side firefighters to connect into the vessel's fire main, what item should be included in the discussion?

- (a) The vessel's skin valve connection.
- (b) The vessel's international shore connection.
- (c) The vessel's bunker port connection.
- (d) The vessel's fire pump discharge flange.

If choice b is selected set score to 1.

128. (3.6.8.1-1) You are the engineer on a vessel of more than 1600 gross tons with a periodically unattended machinery space. A fire has been reported in the engine room and you cannot make entry into the space. How would you direct the Emergency Squad Team Leader to charge the fire main?

- (a) Start the Engine Room Fire Pump from the Bridge.
- (b) Start the Emergency Fire Pump remotely from the Chief Mate's office.
- (c) Start the Engine Room Fire Pump from the Chief Engineer's office.
- (d) Start the Emergency Fire Pump remotely from the Bridge or Emergency Gear Locker.

If choice d is selected set score to 1.

129. (3.6.8.1-2) Your ship has a low pressure carbon dioxide system that covers the engine room. Fire has been reported in the engine room and the decision has been made to dump the carbon dioxide system into the engine room. While following the procedures to release carbon dioxide you find one engine room supply fan damper that will not close. How should you proceed?

- (a) Continue the release procedures and dump the carbon dioxide, after the release then try to seal the fan damper opening.
- (b) Continue the release procedures and dump the carbon dioxide with the damper still open.
- (c) Cover the fan damper opening with burlap bags to slow the flow of air into the engine room and then continue with the release procedures.
- (d) Cover the fan damper opening with a plastic tarp to stop the flow of air into the engine room and then continue with the release procedures.

If choice d is selected set score to 1.

130. (3.6.8.1-4) As Chief Engineer of a vessel of more than 1600 gross tons on an international voyage, you have just activated the CO2 release handle for the engine room to extinguish a fire. How would you direct the emergency team to reenter the engine room?

- (a) Have the team wait two hours, then, with the team dressed in fire fighting gear and SCBA, approach the engine room door. Crack the door open and advance, if no fire is detected.
- (b) Wait until there are no signs of smoke or heat, then, with the team dressed in fire fighting gear and SCBA, approach the engine room door. Crack the door open with a charged fire hose at the ready and advance, if no fire is detected.
- (c) Wait until there are no signs of smoke or heat have the team dressed in fire fighting gear and approach the engine room door. Crack the door open and advance, if no fire is detected.
- (d) Have the team wait two hours and crack the door open with a charged fire hose at the ready and advance, if no fire is detected.

If choice b is selected set score to 1.

131. (3.6.8.1-6) While in the engine control room you smell smoke and see it coming from the vent in the main switchboard panel. Which of the many different types of extinguishers, if any, are required to be in that space and why would it be best suited to extinguish this class of fire?

- (a) A fixed CO2 system as it will smother the fire while limiting the clean up and damage to the area around the fire.
- (b) A portable CO2 extinguisher as it will smother the fire while limiting the clean up and damage to the area around the fire.
- (c) A portable dry chemical extinguisher, as it the most common type of portable extinguisher found onboard ships.
- (d) No portable extinguisher is required in the engine control room.

If choice b is selected set score to 1.

132. (3.6.8.1-8) An oil fire is reported in the purifier room bilge. How would you combat this fire?

- (a) Direct aqueous film forming foam off the overhead or nearby bulkhead, using a bank down or bounce off method to extinguish the fire.
- (b) With water using a low velocity fog applicator to extinguish the fire.
- (c) Direct a dry powder extinguisher at the base of the fire and discharge the powder in a sweeping motion to extinguish the fire.
- (d) Direct aqueous film forming foam in a straight stream into the fuel to extinguish the fire.

If choice a is selected set score to 1.

133. (3.6.8.2-1) When combating a major electrical fire at sea, the main consideration is _____.

- (a) preventing a total loss of electrical power
- (b) eliminating the toxic fumes from burning insulation
- (c) preventing saltwater damage to electrical equipment
- (d) reducing the possibility of electrical shock to personnel

If choice d is selected set score to 1.

134. (3.6.8.2-2) The most important characteristic of a fire extinguishing agent to be used on electrical fires is for the agent to be _____.

- (a) nonconducting
- (b) wet
- (c) flame resistant
- (d) easily removable

If choice a is selected set score to 1.

135. (3.6.8.2-4) If a fire occurs in an electric cable, in which the inner layers of insulation, or the insulation covered by armor is burning, you should _____.

- o (a) separate the two ends
- o (b) secure power to the cable
- o (c) cut the cable with an insulated cable cutter
- • (d) all of the above

If choice d is selected set score to 1.

136. (3.6.8.3-4) In fighting a fire in a fuel tank, the FIRST action you should attempt is to _____.

- • (a) secure all sources of fresh air to the tank
- o (b) station someone at the fixed CO2 release controls
- o (c) top off the tank to force out all vapors
- o (d) begin transferring the fuel to other tanks

If choice a is selected set score to 1.

137. (3.6.8.3-1) The longer an oil fire is permitted to burn, the _____.

- o (a) easier it is to control
- o (b) less chance there is of reignition
- • (c) harder it is to extinguish
- o (d) easier it is to extinguish

If choice c is selected set score to 1.

138. (3.6.8.3-2) As an engineer on a tanker of more than 1600 gross tons on an international voyage, how would you direct the fire team to combat a large cargo space fire?

- o (a) Use the fixed carbon dioxide system to extinguish the fire.
- o (b) Open the ullage caps and lower the level in tanks adjacent to the tank on fire.
- o (c) Use the inert gas system to extinguish the fire.
- • (d) Use fixed water and foam systems to extinguish the fire.

If choice d is selected set score to 1.

139. (3.6.8.3-5) When fighting a liquefied natural gas fire, you should _____.

- o (a) use only carbon dioxide
- o (b) extinguish the fire, then secure the source of gas
- o (c) use only dry chemical
- • (d) secure the source of gas, then extinguish the fire

If choice d is selected set score to 1.

140. (3.6.8.3-3) As Chief Engineer, how would you instruct a new Third Assistant Engineer to use the fire fighting apparatus illustrated to fight an oil fire at the bunker station? Illustration SF-0020

- (a) This piece of firefighting equipment cannot be use to extinguish an oil fire.
- (b) Direct aqueous film forming foam off the overhead or nearby bulkhead, using a bank down or bounce off method to extinguish the fire.
- (c) Direct water off the overhead or nearby bulkhead, using a bank down or bounce off method to extinguish the fire.
- (d) Direct aqueous film forming foam in a straight stream into the fuel to extinguish the fire.

If choice b is selected set score to 1.

141. (3.6.8.4-1) As Chief Engineer sailing aboard chemical tankers you frequently review the best practices regarding fire fighting during safety meetings. Which of the following would align with industry best practice regarding the use of water in extinguishing chemical fires?

- (a) Water is best used for cooling of the chemical itself as well as surrounding areas.
- (b) Water is best applied from opposing directions to ensure maximum effectiveness.
- (c) Water is best applied to the chemical fire in a solid stream in order to maximize effectiveness.
- (d) Water is best applied in spray form to smother the chemical fire.

If choice a is selected set score to 1.

142. (3.6.8.5-1) One of the main concerns when fighting a galley fire is _____.

- (a) the loss of stability
- (b) spreading of fire through the engineering space
- (c) the igniting of a grease fire in the range hood ventilation system
- (d) contamination food with extinguishing agent

If choice c is selected set score to 1.

143. (3.6.8.5-2) In the event of an exhaust duct fire, most dry chemical and carbon dioxide galley range fixed extinguishing systems are automatically activated through the action of a stainless steel cable, spring and a _____.

- (a) fusible link
- (b) stack switch
- (c) thermostat
- (d) pyrostat

If choice a is selected set score to 1.

144. (3.6.8.5-3) A fire has been reported in the ship's galley, as Chief Engineer you direct the team leader of the # 2 emergency squad to secure ventilation to the space. What would your next command be to the emergency team leader, before they can actually start extinguishing the fire?

- (a) Have electrical power secured to the galley.
- (b) Prepare the lifeboat to abandon ship.
- (c) Start the emergency generator.
- (d) Prepare extra portable fire extinguishers.

If choice a is selected set score to 1.

145. (3.6.8.5-4) As team leader of the ship's # 2 emergency squad; you have just informed the Bridge that the fire in the Galley has been extinguished. What would you instruct your squad to do next?

- (a) Set a reflash watch in the Galley.
- (b) Send them to coffee.
- (c) Refill any SCBA bottles used during the fire.
- (d) Restock the emergency locker; replacing any equipment used during the fire.

If choice a is selected set score to 1.

146. (3.6.8.6-1) As First Engineer you are the senior engineering officer in Emergency Squad #1. The fire alarm sounds and you report to the muster station where the Bridge informs you smoke has been reported coming from the ship's laundry room. What should your first action be?

- (a) Charge the ship's fire main
- (b) Start boundary cooling the area.
- (c) Secure power and ventilation to the laundry room and inform the Bridge once this is done.
- (d) Help dress out other crew members in fireman's outfit.

If choice c is selected set score to 1.

147. (3.6.8.6-2) As team leader of the #2 emergency squad you arrive at the scene of a fire in the Bosun's store room on the weather deck. How would you proceed to fight this fire?

- (a) First, size up the fire situation before committing crew members and equipment and then relay accurate information to the Bridge.
- (b) Open the store room door before any boundary cooling is done to determine what is burning.
- (c) Pull the fixed fire suppressant system that covers the Bosun Store room to extinguish the fire.
- (d) Immediately start boundary cooling the adjacent compartment.

If choice a is selected set score to 1.

148. (3.6.8.6-3) A fire has been reported in the ship's laundry room. As Chief Engineer you direct the team leader of the #1 emergency squad to secure ventilation to the space. What would your next command be to the emergency team leader, before they can actually start extinguishing the fire?

- (a) Prepare extra fire hoses.
- (b) Have electrical power secured to the laundry room. A lock-out tag should be placed on the breaker or switch stating the circuit has been de-energized, to protect crew members from electrical shock.
- (c) Prepare extra portable fire extinguishers.
- (d) Prepare the lifeboats to abandon ship.

If choice b is selected set score to 1.

149. (3.6.8.6-4) You notice smoke coming from an open laundry room doorway, which smells like electrical insulation. After activating the fire alarm, which of the following would be the lowest action priority? -

- (a) Close the door to the room.
- (b) Locate the nearest CO2 or dry chemical extinguisher.
- (c) Secure power to the washers and dryers.
- (d) Break out the nearest fire hose.

If choice d is selected set score to 1.

150. (3.6.8.7-1) While in port working cargo a fire is reported on the forward car deck. The Captain sounds the general alarm, the crew musters and starts fighting the fire. As Chief Engineer you inform the Captain that shore side fire fighting assistance needs to be called, how would you proceed?

- (a) Continue fighting the fire and use the ship's Fire Control Plan and coordinate with shore side fire fighters upon their arrival to extinguish the fire.
- (b) Stop firefighting efforts and wait until the shore side fire fighters arrive.
- (c) Continue fighting the fire and use the ship's SOLAS manual and coordinate with shore side fire fighters to extinguish the fire.
- (d) Continue fighting the fire and use the ship's SOPEP plan and coordinate with shore side fire fighters to extinguish the fire.

If choice a is selected set score to 1.

151. (3.6.8.7-2) You are the Chief Engineer of a vessel of more than 1600 gross tons on an international voyage. While in port working cargo a fire is reported in the engine room. Shore side fire fighting assistance has been requested. How would you proceed?

- (a) Evacuate the ship and leave the fighting of the fire to the shore side fire fighters.
- (b) Use the ship's SOPEP plan and coordinate with shore side fire fighters to extinguish the fire.
- (c) Use the ship's SOLAS manual and coordinate with shore side fire fighters to extinguish the fire.
- (d) Use the ship's Fire Control Plan and coordinate with shore side fire fighters to extinguish the fire.

If choice d is selected set score to 1.

152. (3.6.8.7-3) The best means of combating an oil fire on the surface of the water surrounding a vessel tied to the pier is to use _____.

- (a) dry chemical around the fire
- (b) water fog over the fire
- (c) solid water streams directly into the fire
- (d) foam directed against the vessel's side

If choice d is selected set score to 1.

153. (3.6.8.7-4) In the event of a vessel fire in port, shore side firefighters can find details on vessel's fire control plans in which of the following locations?

- (a) A watertight enclosure located on the bridge wing.
- (b) A watertight enclosure located at the lifeboats.
- (c) A watertight enclosure located outside the accommodations.
- (d) With the vessel agent.

If choice c is selected set score to 1.

154. (3.6.8.7-5) Your vessel is traveling on an international voyage. Regarding the assistance of shore side fire fighters to combat a vessel fire while in port, what document, if any, is required, and where would it be located?

- (a) Fire Control Plan; permanently stored in a prominently marked weather tight enclosure outside the deck house.
- (b) International Oil Pollution Prevention Certificate located in the Captain's office.
- (c) Minimum Safe Manning Certificate located on the Bridge.
- (d) No document required.

If choice a is selected set score to 1.

155. (3.6.8.8-1) Your vessel has two fire pumps and a low pressure CO2 system, which protect the cargo holds and the engine room. A fire is reported on the #3 car deck aft hold. The emergency teams are on air. The first team reports from the forward end of the #3 car deck that there is heavy black smoke coming from the aft end of the hold and there is very limited visibility. They also report they cannot see any flames from their location. The second emergency team reports paint burning and blistering on the hull in the area of #3 car deck aft, as seen from the weather deck. How would you combat this fire?

- (a) Pull all crew members out of the cargo holds and start boundary cooling from the weather deck with fire hoses. Simultaneously start the procedure to release CO2 into the zone that is on fire.
- (b) Recommend to the Captain to abandon ship.
- (c) Boundary cool from the weather deck with fire hoses and use cargo fans to exhaust the smoke.
- (d) Have the fire team’s advance into the aft end of #3 hold with fire hoses to locate and extinguish the fire.

If choice a is selected set score to 1.

156. (3.6.11.1-3) A liquid having a flash point above 80°F, but below 150°F, would be termed a grade _____.

- (a) D-combustible liquid
- (b) C-flammable liquid
- (c) A-flammable liquid
- (d) E-combustible liquid

If choice a is selected set score to 1.

157. (3.6.11.1-12) The worst atmospheric condition for dispersion of hydrogen sulfide is _____.

- (a) full sun with high winds
- (b) heavy rain
- (c) nearly calm, clear nights or early morning
- (d) gusty winds with rain

If choice c is selected set score to 1.

158. (3.6.11.1-8) The explosive range of methane is 5% to 15% by volume in air. This means a vapor/air mixture of _____.

- (a) 20 percent methane by volume is too lean to burn
- (b) 3 percent methane by volume is too rich to burn
- (c) 5 percent methane by volume will give a reading of 100 percent L.E.L. on a combustible gas indicator
- (d) 10 percent methane by volume is too rich to burn

If choice c is selected set score to 1.

159. (3.6.11.1-5) The volatility of a liquid is the tendency of a liquid to _____.

- (a) explode
- (b) ignite
- (c) asphyxiate
- (d) vaporize

If choice d is selected set score to 1.

160. (3.6.11.1-6) The highest concentration of a harmful substance to which a person may be exposed without danger to health, is termed the _____.

- (a) threshold limit value
- (b) tolerance point
- (c) odor threshold
- (d) vapor pressure

If choice a is selected set score to 1.

161. (3.6.11.1-10) According to Coast Guard Regulations (46 CFR 30), a flammable liquid with a Reid vapor pressure of 8-1/2 psi or less, and a flash point of 80°F or below, is a grade _____.

- (a) C
- (b) E
- (c) D
- (d) A

If choice a is selected set score to 1.

162. (3.6.11.2-1) Bunker "C" is classified as a grade _____.

- (a) E liquid
- (b) A liquid
- (c) D liquid
- (d) B liquid

If choice a is selected set score to 1.

163. (3.6.11.2-2) Which of the following is classified as a grade "E" combustible liquid?

- (a) Bunker "C"
- (b) Very light naphtha
- (c) Benzene
- (d) Most commercial gasoline

If choice a is selected set score to 1.

164. (3.6.11.2-3) Which of the petroleum products listed has a flash point below 150°F?

- (a) Light fuel oils
- (b) Road oils
- (c) Asphalt
- (d) Lubricating oils

If choice a is selected set score to 1.

165. (3.6.11.2-4) If diesel fuel vapors in a compartment are considered to be within the flammable range _____.

- (a) the vapor air mixture is too rich to burn
- (b) an explosion may occur if a source of ignition is present
- (c) the upper explosive limit has been exceeded
- (d) the vapor air mixture is too lean to burn

If choice b is selected set score to 1.

166. (3.6.11.2-5) Which of the listed pumping arrangements will be hazardous when two similar centrifugal pumps are used to discharge a cargo of flammable liquid?

- (a) Both pumps operating at the same speed and taking suction from a common line.
- (b) Each pump operating at a different pressure and discharging into a common line.
- (c) Each pump operating at a different speed and taking suction from a common line.
- (d) Both pumps operating at the same speed and discharging into a common line.

If choice b is selected set score to 1.

167. (3.6.11.2-6) When preparing to pump flammable liquids with a centrifugal pump, you should _____.

- (a) lift the relief valve by hand to check its operation
- (b) have a standby pump running with the discharge valve closed
- (c) check for gland leakage and any fire hazard
- (d) draw a small quantity of liquid to prime the pump

If choice c is selected set score to 1.

168. (3.6.11.3-4) Petroleum vapors are dangerous _____.

- (a) at all times due to their toxicity
- (b) only if the oxygen concentration is below 16 percent
- (c) only if the vapor is between the upper and lower explosive limit
- (d) only if the source of the vapor is above its flash point

If choice a is selected set score to 1.

169. (3.6.11.3-10) Which of the following precautions are necessary when using any electrical equipment in a hazardous location, such as a cargo pump room?

- (a) Each compartment where flammable gas is expected to accumulate is to be closed and secured.
- (b) The adjacent compartments are to be gas free.
- (c) The pump room is to be gas free.
- (d) All of the above.

If choice d is selected set score to 1.

170. (3.6.11.3-6) Tankers carrying cryogenic cargoes, such as LNG, are fitted with gas detector systems alarmed at 30% of the lower explosive limit. If the gas detector alarms sounds, this means _____.

- (a) a flammable vapor concentration exists at the sample point, but it is too lean to burn
- (b) an explosion is about to take place
- (c) the detector sensor is sampling a space where the cargo vapor concentration is 30 percent by volume
- (d) the detector is sampling a space in which 30 percent of the atmosphere is explosive

If choice a is selected set score to 1.

171. (3.6.11.3-8) Span gas is used aboard liquefied natural gas carriers to _____.

- (a) detect leaks in cargo piping
- (b) calibrate the gas leak detectors
- (c) odorize the cargo
- (d) inert the barrier spaces

If choice b is selected set score to 1.

172. (3.6.11.3-2) When pumping sour crude, which gas should be tested for prior to entering the cargo pump room to repair a leaking pump?

- (a) Benzene
- (b) Carbon monoxide
- (c) Hydrogen sulfide
- (d) Tetraethyl lead

If choice c is selected set score to 1.

173. (3.6.11.4-1) If a cargo tank has not been certified as gas free, _____.

- (a) breathing apparatus should always be used
- (b) a man may work safely without breathing apparatus in cold weather, as vapors are less volatile
- (c) breathing apparatus would not be necessary in an emergency as you would only be in the tank a short time
- (d) entry without a breathing apparatus may be made at the top of the tank since petroleum vapors are heavier than air

If choice a is selected set score to 1.

174. (3.6.11.4-2) Which of the following conditions must be met before a marine chemist will issue a certificate for a compartment to be "safe for workers, safe for hot work"?

- (a) The residues in the compartment must not be capable of producing any toxic gas under existing atmospheric conditions.
- (b) The concentration of combustible gases in the compartment's atmosphere must be less than 10 percent of the lower flammable limit.
- (c) The toxic gases in the compartment's atmosphere must be within permissible concentrations.
- (d) All of the above.

If choice d is selected set score to 1.

175. (3.6.11.4-3) The atmosphere of an empty fuel tank is tested and designated "gas free". Which of the following statements is correct concerning this tank?

- (a) The gas free status is good as long as the initial conditions remain unchanged.
- (b) The concentration of flammable gas in the compartment is less than 10% of the lower flammable limit.
- (c) The tank should be frequently retested.
- (d) All of the above.

If choice d is selected set score to 1.

176. (3.6.11.4-4) A fuel tank on a barge has been certified by a marine chemist as being "Safe for Men" and "Safe for fire." This condition may change if_____.

- (a) the ambient temperature changes
- (b) a product leaks into the certified tank
- (c) muck, sludge, or scale in the tank give off additional vapors
- (d) all of the above

If choice d is selected set score to 1.

177. (3.6.11.4-5) A fuel tank is considered to be gas free when the tank is _____.

- (a) inerted with carbon dioxide for 24 hours
- (b) free of all dangerous concentrations of flammable or toxic gases
- (c) thoroughly ventilated for at least 24 hours
- (d) free of most flammable gas concentrations

If choice b is selected set score to 1.

178. (3.6.11.5-9) A health hazard term listed on a Material Safety Data Sheet (MSDS) that indicates allergic-like reaction in some people after repeated exposure is _____.

- ○ (a) skin contact hazard
- • (b) sensitizer
- ○ (c) pyrophoric hazard
- ○ (d) oxidizer

If choice b is selected set score to 1.

179. (3.6.11.5-2) The physical data term on a Material Safety Data Sheet (MSDS) describing whether a liquid is lighter or heavier than water is _____.

- ○ (a) solubility
- ○ (b) flotation point
- • (c) specific gravity
- ○ (d) viscosity

If choice c is selected set score to 1.

180. (3.6.11.5-8) A reproductive health hazard, listed on a Material Safety Data Sheet (MSDS), that can cause genetic changes in sperm or egg cells is called a _____.

- • (a) mutagen
- ○ (b) carcinogen
- ○ (c) teratogen
- ○ (d) cryogenic

If choice a is selected set score to 1.

181. (3.6.11.5-6) What term is listed on a Material Safety Data Sheet (MSDS) to describe a chemical that can produce life-threatening or seriously disabling health hazard ?

- ○ (a) Recommended toxicity
- • (b) High toxicity
- ○ (c) Low toxicity
- ○ (d) Moderate toxicity

If choice b is selected set score to 1.

182. (3.6.11.5-1) The physical data term on a Material Safety Data Sheet (MSDS) that indicates if the vapor formed by a material is lighter or heavier than air is called _____.

- • (a) vapor density
- ○ (b) vapor pressure
- ○ (c) vapor gravity
- ○ (d) vapor level

If choice a is selected set score to 1.

183. (3.6.12.1-1) The Oil Record Book must be maintained onboard the vessel for _____.

- (a) 6 months and then submitted to the nearest Marine Safety Office for review
- (b) the duration of the ship's active employment
- (c) an annual inspection
- (d) not less than 3 years and be readily available for inspection

If choice d is selected set score to 1.

184. (3.6.12.1.2) Which of the following machinery space operations is required to be logged in the Oil Record Book?

- (a) Ballasting or cleaning of fuel oil tanks.
- (b) Changing out sprayer plates to adjust for steam demand.
- (c) Daily inspection of engine room bilges.
- (d) Shifting suction of main fuel pump to reserve fuel oil tank.

If choice a is selected set score to 1.

185. (3.6.12.1-3) The sections of an Oil Record Book preceding the log pages contain a _____.

- (a) detailed listing of all organizations to call in the event of an accidental oil spill
- (b) complete classification of hazardous materials
- (c) damage control plan for isolating fire main valves
- (d) list of machinery space operation items

If choice d is selected set score to 1.

186. (3.6.12.1-4) Which ship must maintain Part II (Cargo/Ballast Operations) of the Oil Record Book?

- (a) A non-tanker that carries more than 200 cubic meters of oil in bulk.
- (b) A ship of 200 gross tons or above, other than an oil tanker.
- (c) A ship of 150 gross tons or above, other than an oil tanker.
- (d) An oil tanker of 100 gross tons or above.

If choice a is selected set score to 1.

187. (3.6.12.1-5) With regards to a ship's Oil Record Book, an oil tanker of 150 gross tons and above must maintain entries in _____.

- (a) Part I only
- (b) Part II only
- (c) Both Part I and Part II
- (d) Part III

If choice c is selected set score to 1.

188. (3.6.12.1-6) When making entries in the Oil Record Book, all quantities should be _____.

- (a) verified by the Chief Engineer
- (b) recorded as cubic meters with a conversion to barrels
- (c) consistently recorded through the Oil Record Book in one specified unit (gallons, barrels, cubic meters)
- (d) recorded directly from the oil discharge monitor

If choice c is selected set score to 1.

189. (3.6.12.2-2) During fueling operations oil is detected in the water adjacent to your vessel. If however, it is determined to be from some source other than your vessel, you should _____.

- (a) secure operations until the exact type of oil is determined
- (b) make an entry in the oil record book to that effect
- (c) notify the Coast Guard
- (d) All of the above

If choice c is selected set score to 1.

190. (3.6.12.2-4) After taking on fuel oil, the hoses should be disconnected and _____.

- (a) drained into buckets or fuel tanks
- (b) drained over the side and washed out
- (c) draped over the fantail to dry out
- (d) drained into the bilges and washed out

If choice a is selected set score to 1.

191. (3.6.12.2-6) Which of the following methods will reduce the possibility of producing an electrical spark?

- (a) Using a cargo hose with a built in electrical bonding wire.
- (b) Placing an insulating flange or a section of nonconducting hose in the hose setup.
- (c) Connecting a bonding wire between the shore side piping and the vessel.
- (d) All of the above.

If choice d is selected set score to 1.

192. (3.6.12.3.2-8) When a fuel oil tank is being topped off during bunkering operations, the tank valve should be closed _____.

- (a) rapidly to prevent overflow
- (b) after the shore pumps are stopped
- (c) to prevent gas from escaping through the pressure-vacuum relief valves
- (d) slowly to prevent surge stresses

If choice b is selected set score to 1.

193. (3.6.12.2-10) If the overflow tank high-level alarm sounds while the fuel oil tanks are being topped off, the engineer should _____.

- (a) close the overflow tank filling valve
- (b) stop the fuel oil pumping operation
- (c) reduce the fuel oil pumping rate
- (d) close the static leg filling valve

If choice b is selected set score to 1.

194. (3.6.12.2-12) During oil transfer operations, who would be responsible to guarantee that the posted transfer procedures are being followed?

- (a) The senior able seaman
- (b) The tankerman
- (c) The designated person in charge
- (d) The oiler

If choice c is selected set score to 1.

195. (3.6.12.3-1) Coast Guard regulations require a shipboard oil pollution emergency plan to be reviewed _____.

- (a) quad-annually only
- (b) annually only
- (c) biennially only
- (d) only one every five years

If choice b is selected set score to 1.

196. (3.6.12.3-3) When amendments are made to the shipboard oil pollution emergency plan, all revisions must be submitted to the Coast Guard _____.

- (a) six months prior to the end of the approval period
- (b) and cannot be implemented without approval
- (c) one month prior to the anniversary date of the plan
- (d) and can be implemented without immediate approval as long as final approval is received within six months of submittal

If choice b is selected set score to 1.

197. (3.6.12.3-5) In accordance with domestic regulations, which of the following statements is true regarding U.S. flag vessel response plans for the carriage of oil?

- (a) All domestic regulations regarding emergency response contingency plans are superseded by MARPOL, the international pollution prevention standard.
- (b) The owner of a U.S. Flag vessel engaged in the carriage of oil regardless of size and route does not need to prepare and submit a contingency plan for emergency response in the event of a spill.
- (c) A shipboard oil pollution emergency response plan which includes, but is not limited to, shipboard spill mitigation procedures must be submitted to, and approved by, the United States Coast Guard by the vessel operating company prior to the vessel engaging in trade.
- (d) Oil is considered regulated cargo and all vessels engaged in the domestic oil trade are issued a Certificate of Inspection by the USCG. The issuance of this document satisfies all USCG requirements for vessel emergency contingency response plans.

If choice c is selected set score to 1.

198. (3.6.12.3-6) Which of the following statements are true regarding U.S. flag vessel response plans for the carriage of oil?

- (a) Oil is considered regulated cargo and all vessels engaged in the domestic oil trade are issued a Certificate of Inspection by the USCG. The issuance of this document satisfies all USCG requirements for vessel emergency contingency response plans.
- (b) A shipboard oil pollution emergency response plan which includes, but is not limited to, shipboard spill mitigation procedures that must be submitted to the United States Coast Guard for approval.
- (c) All domestic regulations regarding emergency response contingency plans are superseded by MARPOL, the international pollution prevention standard.
- (d) The owner of a U.S. Flag vessel engaged in the carriage of oil regardless of size and route does not need to prepare and submit a contingency plan for emergency response in the event of a spill.

If choice b is selected set score to 1.

199. (3.6.12.3-8) In cleaning up an oil spill, the use of chemical agents would _____.

- (a) remove the oil from the water
- (b) disperse or dissolve the oil in the water
- (c) not affect the oil
- (d) absorb the oil for easy removal

If choice b is selected set score to 1.

200. (3.6.12.4-1) Victual waste is _____.

- (a) the final waste product of a manufacturing process
- (b) any garbage that comes from food or food provisions
- (c) the final discharge of sewage treatment plants
- (d) the resultant sludge that is collected after water washing a boiler

If choice b is selected set score to 1.

201. (3.6.12.4-2) When dumping garbage into the sea, other than special areas, _____.

- (a) records must be provided and maintained for two years
- (b) no record is required if dumping is carried out more than 25 miles offshore and there is no included plastic material
- (c) an entry into the official log book must be made
- (d) the U.S. Coast Guard must be notified for each occurrence

If choice a is selected set score to 1.

202. (3.6.12.4-3) The amount of garbage disposed must be entered into the records maintained by each ship and stated in _____.

- (a) cubic yards convertible to long tons
- (b) cubic meters
- (c) weight in either kilogram or pounds
- (d) barrels, measured in 55 gallon drums

If choice b is selected set score to 1.

203. (3.6.12.4-4) Which of the following statements is true concerning the overboard discharge of vessel sewage at sea? -

- (a) The vessel may discharge disinfected and comminuted sewage into the sea, from an approved system, only if the vessel is more than three nautical miles from the nearest land.
- (b) The vessel must have an approved sewage plant.
- (c) The vessel may discharge sewage into the sea, from an approved system which is not comminuted or disinfected, only if the vessel is more than 12 nautical miles from the nearest land.
- (d) All of the above

If choice d is selected set score to 1.

204. (3.6.12.5-1) The term "arrival ballast" refers to _____.

- (a) brackish water ballast
- (b) dirty ballast
- (c) any form of sea water ballast
- (d) clean ballast

If choice d is selected set score to 1.

205. (3.6.12.5-2) In order to prevent the unnecessary release of hydrocarbons to atmosphere, when taking on departure ballast, one method used is to _____.

- (a) use blowers to purge the inert gas from tanks
- (b) completely open the mast riser valve
- (c) allow entering ballast to displace the inert gas to a tank where cargo is currently being discharged
- (d) manually open the pressure/vacuum device

If choice c is selected set score to 1.

206. (3.6.12.5-3) When discharging clean ballast, prior to entering the loading port, if the ballast is determined by the oil monitor to exceed 15 parts per million of oil, the deballasting must _____.

- (a) be stopped until the oil can settle out, then resumed at a slower discharge rate
- (b) be completely discharged in order to load
- (c) be terminated automatically
- (d) be completed only after "load on top" has been completed

If choice c is selected set score to 1.

207. (3.6.12.5-4) A segregated ballast system is a system where _____.

- (a) all ballast lines, tanks, and pumps are independent of those used for oil
- (b) ballast is taken on and discharged through a separate main deck riser
- (c) all ballast is processed through the oily water separator
- (d) ballast and cargo tanks are separated by cofferdams

If choice a is selected set score to 1.

208. (3.6.12.5-5) What would be the minimum distance from any shoreline that a vessel must be located before it is permitted to perform a complete ballast water exchange to be in compliance with U.S. Federal Ballast Water Management Regulations? -

- (a) 200 nautical miles
- (b) 50 nautical miles
- (c) 12 nautical miles
- (d) 100 nautical miles

If choice a is selected set score to 1.

209. (3.6.12.5-1) You are the Chief Engineer of a vessel of more than 1600 gross tons on an international voyage. While bunkering lube oil in port, the hose fails and oil is spilled into the harbor. After securing the transfer, how would you proceed?

- (a) Perform post incident drug and alcohol testing on engine crew members not involved in the transfer operation.
- (b) Set out a boom around the ship to control the spread of the oil.
- (c) Call the local news outlets and report the oil spill.
- (d) Fill out a Declaration of Inspection for the transfer operation.

If choice b is selected set score to 1.

210. (3.6.12.7.1-1) A gurgling noise is heard from within a cargo tank when discharging cargo, this would indicate that the _____.

- (a) tank foot valve is partially clogged
- (b) tank liquid is too viscous
- (c) pump is sucking air
- (d) pump discharge pressure is excessive

If choice c is selected set score to 1.

211. (3.6.12.7.2-1) The term "load on top" is used on many crude oil carriers, is to provide a method for _____.

- (a) loading ballast by gravity
- (b) calculating the ullage in the cargo tanks
- (c) the loading of new cargo into a decanted slop tank as a procedure to minimize pollution
- (d) calculating the ratio of cargo expansion in a cargo tank

If choice c is selected set score to 1.

212. (3.6.12.7.3-1) Pressure-vacuum relief valves, as used on tank vessels, are usually set to operate at two points, _____.

- (a) 14.2 psia; 2 psig
- (b) 26 inches of vacuum; 5 psig
- (c) any two points above atmospheric pressure
- (d) any two points below atmospheric pressure

If choice a is selected set score to 1.

213. (3.6.12.7.3-2) Pressure-vacuum relief valves on tank vessel cargo tanks should be kept in good working order to prevent _____.

- (a) entry of burning substances
- (b) escape of explosive vapors
- (c) damage to tank boundaries
- (d) oil spillage on deck

If choice c is selected set score to 1.

214. (3.6.12.7.3-3) Which of the following pressures represents the normal pressure setting of a pressure-vacuum relief valve as normally found on tank vessels?

- (a) 16.7 psia - 14.2 psia
- (b) 20.7 psia - 14.6 psia
- (c) 18.7 psia - 14.4 psia
- (d) 22.7 psia - 14.7 psia

If choice a is selected set score to 1.

215. (3.6.12.7.4-1) Tank stripping is accomplished more effectively by using a _____.

- (a) a positive displacement pump
- (b) a multistage centrifugal pump
- (c) the load on top system
- (d) the water displacement method

If choice a is selected set score to 1.

216. (3.6.12.7.5-1) In order for you to operate your vessel's crude oil wash system, the cargo tanks to be washed must be _____.

- (a) full of cargo
- (b) inerted
- (c) opened to the atmosphere for ventilation
- (d) gas free

If choice b is selected set score to 1.

217. (3.6.12.7.5-2) Both crude oil washing and water washing use direct impingement to remove residue from tanks. Crude oil washing has an additional advantage, in utilizing _____.

- (a) a higher pressure jet
- (b) the solvent effect of the crude oil
- (c) a higher temperature
- (d) none of the above.

If choice b is selected set score to 1.

218. (3.6.12.7.5-3) Bottom mounted crude oil washing machines are primarily used for _____.

- (a) washing the entire bottom of the tank
- (b) the majority of crude oil tank cleaning
- (c) areas where direct impingement from deck mounted machines cannot be satisfactorily reached
- (d) all vertical surfaces

If choice c is selected set score to 1.

219. (3.6.12.7.5-4) When tanks have been washed with crude oil, and ballasted without being water rinsed, the ballast is referred to as _____.

- (a) clean ballast
- (b) dedicated ballast
- (c) segregated ballast
- (d) dirty ballast

If choice d is selected set score to 1.

220. (3.6.12.7.5-5) Crude oil washing has which of the following disadvantages?

- ○ (a) Allows buildup of cargo residue on tank walls.
- ○ (b) When completed, more cargo is retained aboard the ship than with water washing.
- ○ (c) Its cleaning ability is very poor.
- • (d) It requires following additional work procedures and close attention by the crew during cargo operations.

If choice d is selected set score to 1.

221. (3.6.12.7.6-1) On a tanker vessel, what is the required combined capacity of the inert gas generating system as compared to the total capacity of all the cargo pumps which can be operated simultaneously?

- ○ (a) 75%
- ○ (b) 100%
- • (c) 125%
- ○ (d) 50%

If choice c is selected set score to 1.

222. (3.6.12.7.6-2) Inert gas systems fitted on tank vessels must be fitted with an alarm to give an audible and visual warning when the oxygen content of the inert gas exceeds _____.

- ○ (a) 16% by volume
- ○ (b) 4% by volume
- • (c) 8% by volume
- ○ (d) 12% by volume

If choice c is selected set score to 1.

223. (3.6.12.7.6-3) Which of the following methods is used to supply inert gas from a flue gas system to the cargo tanks?

- ○ (a) Inert gas compressor
- ○ (b) Exhaust gas pressure
- ○ (c) Natural aspiration
- • (d) High capacity fan

If choice d is selected set score to 1.

224. (3.6.12.7.6-4) Which of the following represents the maximum percent of oxygen, by volume, required to be achieved by a ship's inert gas system, prior to the commencement of crude oil tank washing?

- ○ (a) 12%
- ○ (b) 6%
- • (c) 8%
- ○ (d) 10%

If choice c is selected set score to 1.

225. (3.6.12.7.6-5) The primary function of a "flue gas type" inert gas system is to _____.

- (a) produce 100% oxygen free gas
- (b) produce a gas of 100% pure nitrogen
- (c) generate a high oxygen content gas
- (d) supply conditioned gas with reduced oxygen content

If choice d is selected set score to 1.

226. (3.6.12.7.6-6) Which of the following conditions will result in an automatic shut down of the flue gas inert gas system?

- (a) High temperature gas entering the scrubber.
- (b) Low temperature water leaving the scrubber seal.
- (c) High temperature gas discharge from inert gas blowers.
- (d) Oxygen content of the gas falls below 5%.

If choice c is selected set score to 1.

227. (3.6.12.7.6-7) When securing the operation of an inert gas system, the final step should be _____.

- (a) close the flue gas isolating valve
- (b) secure the salt water supply to the scrubber
- (c) close the deck isolating valve
- (d) secure the inert gas blower

If choice b is selected set score to 1.

228. (3.6.13.1-1) As Chief Engineer or First Assistant Engineer you should be familiar with the six motions of a vessel. Which of these motions affects the governing "transverse" stability? (See illustration.) RP0028

- (a) Roll
- (b) Pitch
- (c) Sway
- (d) Surge

If choice a is selected set score to 1.

229. (3.6.13.1-2) As Chief Engineer or First Assistant Engineer you should be familiar with the six motions of a vessel. Which of these motions affects the governing "positional motion" stability?

- (a) Surge
- (b) Heave
- (c) Sway
- (d) Pitch

If choice b is selected set score to 1.

230. (3.6.13.1-3) As Chief Engineer or First Assistant Engineer you should be familiar with the six motions of a vessel. Which of these motions affects the governing "longitudinal" stability?

- ○ (a) Surge
- ○ (b) Heave
- • (c) Pitch
- ○ (d) Yaw

If choice c is selected set score to 1.

231. (3.6.13.1-4) As Chief Engineer or First Assistant Engineer you should be familiar with the six motions of a vessel. Which of these motions affects the governing "lateral motion" stability?

- ○ (a) Surge
- ○ (b) Heave
- ○ (c) Yaw
- • (d) Sway

If choice d is selected set score to 1.

232. (3.6.13.1-5) As Chief Engineer or First Assistant Engineer you should be familiar with the six motions of a vessel. Which of these motions affects the governing "motion ahead and astern" stability?

- • (a) Surge
- ○ (b) Heave
- ○ (c) Yaw
- ○ (d) Pitch

If choice a is selected set score to 1.

233. (3.6.13.1-6) By what method is the final light ship weight, longitudinal and vertical centers of gravity of a vessel, and final assignment of the load lines determined?

- ○ (a) By relying on calculations based on ballasting a light vessel to full load displacement.
- ○ (b) By relying on naval architectural design calculations.
- • (c) By relying on resultant calculations from an inclining experiment.
- ○ (d) By actually shifting ballast horizontally and longitudinally and relying on resultant calculations.

If choice c is selected set score to 1.

234. (3.6.13.1-7) As Chief Engineer of an ocean going passenger vessel, it is important to know the effect of trim and stability of your ship in the event of damage to a compartment. To minimize the impact of flooding in the event of a grounding, what should be your ship's safe practice regarding watertight doors and hatches?

- (a) All watertight doors in subdivision bulkheads shall be kept closed during navigation except when necessarily opened for working of the vessel, and in such cases they shall always be ready to be immediately closed.
- (b) All watertight doors in subdivision bulkheads shall be kept open during normal operation, except during adverse weather when they shall be closed.
- (c) All watertight doors in subdivision bulkheads shall be kept open during navigation to facilitate crew movement and in all cases they shall always be ready to be immediately closed.
- (d) All watertight doors in subdivision bulkheads shall be kept closed when the vessel is anchored except when necessarily opened for working of the vessel, and in such cases they shall always be ready to be immediately closed.

If choice a is selected set score to 1.

235. (3.6.13.1-9) As Chief Engineer you should understand the fundamental principles of ship construction and theory and factors affecting trim and stability, including the concept of loll and its cause. An angle of loll is commonly caused by which of the following conditions?

- (a) An off-center weight.
- (b) Free surface with G remaining below M.
- (c) High external force such as wind and current.
- (d) A negative GM.

If choice d is selected set score to 1.

236. (3.6.13.2-1) As Chief Engineer you should understand the concept of loll and its cause. An angle of loll is commonly caused by which of the following conditions?

- (a) An off-center weight.
- (b) Free surface with G remaining below M.
- (c) High external force such as wind and current.
- (d) A negative GM.

If choice d is selected set score to 1.

237. (3.6.13.2-2) IMO Resolution A167, 1968, Res. No. 749(18) 3.1 (1995, amended 1999), and section 2.2 in the 2008 IS Code, sets the general criterion for vessels of more than 100 meters in length. Your vessel is covered by this regulation. In review of your vessels stability data, after refueling you notice that the GM of the vessel is less than the required 0.15 meters. What should you instruct the 2nd engineer to do with the fuel just received?

- (a) Transfer the fuel to raise the ship's KG and ignore the free surface effect.
- (b) Transfer the fuel to increase the free surface effect and raise the ship's KG.
- (c) Transfer the fuel to lower the ship's KG and minimize the free surface effect.
- (d) Do nothing because the minimum GM required in 0.1meters.

If choice c is selected set score to 1.

238. (3.6.13.2-3) After refueling your vessel you notice that the GM of the vessel is less than the required 0.15 meters. What do you do?

- (a) Transfer the fuel to lower the ship's KG and minimize the free surface effect.
- (b) Transfer the fuel to increase the free surface effect and raise the ship's KG.
- (c) Transfer the fuel to raise the ship's KG and ignore the free surface effect.
- (d) Do nothing because the minimum GM required in 0.1meters.

If choice a is selected set score to 1.

239. (3.6.13.3-3) The distance between the bottom of the hull and the waterline is called _____.

- (a) tonnage
- (b) freeboard
- (c) reserve buoyancy
- (d) draft

If choice d is selected set score to 1.

240. (3.6.13.3-2) After transferring a weight forward on a vessel, the draft at the center of flotation will _____.

- (a) decrease
- (b) increase
- (c) remain the constant
- (d) change, depending on the location of the LCG

If choice c is selected set score to 1.

241. (3.6.13.3-1) Many uninspected motor vessels require load lines. For the purpose of the Load Line Regulations, the term 'surveyor' means _____.

- (a) any person from the Coast Guard who performs duties with respect to the inspection, enforcement, and administration of Title 52 of the revised statute
- (b) an officer of the Coast Guard designated by the Commandant to command all Coast Guard activities within his district
- (c) any person from the Coast Guard who is in charge of a marine inspection zone
- (d) any person designated by the American Bureau of Shipping who actually examines the vessel

If choice d is selected set score to 1.

242. (3.6.13.4-4) With no environmental forces acting on the vessel, the center of gravity of an inclined vessel is vertically aligned with the _____.

- (a) original vertical centerline
- (b) center of flotation
- (c) longitudinal centerline
- (d) metacenter

If choice a is selected set score to 1.

243. (3.6.13.4-3) A vessel's center of gravity is lowered when the _____.

- (a) reserve buoyancy increases
- (b) freeboard is increased
- (c) tanks are ballasted
- (d) trim is increased

If choice c is selected set score to 1.

244. (3.6.13.4-2) The important stability parameter 'KG' is defined as the _____.

- (a) metacentric height
- (b) height of the metacenter above the keel
- (c) height of the center of buoyancy above the keel
- (d) height of the center of gravity above the keel

If choice d is selected set score to 1.

245. (3.6.13.4-1) The symbol shown in the illustration and used as a reference from which the height of the center of gravity is measured, is item number _____. SF-0022

- (a) 5
- (b) 2
- (c) 4
- (d) 3

If choice b is selected set score to 1.

246. (3.6.13.4-5) As Chief Engineer you should understand the concept of corrective measures and their purpose. The following four actions will have which affect on the vessel? 1) Add weight low and symmetrically about the center line. 2) Remove high weight symmetrically. 3) Move weight down symmetrically. 4) Eliminate any free surface present.

- (a) To correct for the trim of a vessel to achieve parallel sinkage.
- (b) To correct for the trim of a vessel to achieve a desired trim by the head.
- (c) To minimize the righting moment a vessel has thereby increasing her stability.
- (d) To move the center of gravity down to a position below the metacenter and remove an angle of loll.

If choice d is selected set score to 1.

247. (3.6.13.4-6) As Chief Engineer your vessel has been damaged and one compartment has partially flooded. The vessel has free communication with the sea with water flowing in and out as the vessel rolls. The most important factor contributing to free communication loss of stability is which of the following?

- (a) Distance from the vessel centerline to the centerline of the wing tank.
- (b) Whether or not the wing tank on the other side of the vessel is full or empty.
- (c) Breadth of the wing tank affected.
- (d) Depth from the bottom of the tank to the waterline.

If choice a is selected set score to 1.

248. (3.6.13.5-4) When a vessel is inclined, the tendency for it to return to its original position is caused by the _____.

- (a) increased free surface in the buoyant wedge
- (b) upward movement of the center of flotation
- (c) movement of the center of buoyancy toward the low side of the vessel
- (d) movement of the center of gravity

If choice c is selected set score to 1.

249. (3.6.13.5-3) The center of volume of the immersed portion of the vessel is the _____.

- (a) center of gravity
- (b) metacentric height
- (c) center of flotation
- (d) center of buoyancy

If choice d is selected set score to 1.

250. (3.6.13.5-2) The water in which a vessel floats provides vertical upward support. The point through which this support is assumed to act is known as the center of _____.

- (a) effort
- (b) buoyancy
- (c) gravity
- (d) flotation

If choice b is selected set score to 1.

251. (3.6.13.5-1) Which abbreviation represents the height of the center of buoyancy?

- (a) KB
- (b) CB
- (c) BM
- (d) BK

If choice a is selected set score to 1.

252. (3.6.13.5-5) As Chief Engineer your vessel has been damaged and one compartment has partially flooded. You understand that you have lost buoyancy and have added weights. If transverse stability in the flooded condition is poor or negative, every effort should be made to reduce the free surface and to lower the center of gravity. Of main importance is for you to assure which of the following is maintained?

- (a) A no list condition.
- (b) As much reserve buoyancy as possible.
- (c) A GM that is at least neutral - G moved down to be at M.
- (d) Transfer water from ballast tanks to the opposite side of the damage.

If choice b is selected set score to 1.

253. (3.6.13.6-5) If a vessel initially has no list and no significant trim, which of the developments shown in the illustration will result in the greatest list? SF-0025

- (a) B
- (b) C
- (c) A
- (d) D

If choice d is selected set score to 1.

254. (3.6.13.6-6) If your vessel has a starboard list after taking on fuel, you would transfer fuel _____.

- (a) aft
- (b) to starboard
- (c) to port
- (d) forward

If choice c is selected set score to 1.

255. (3.6.13.6-4) The difference between the initial trim of a vessel and the trim after a change in load has occurred is known as _____.

- (a) change of draft
- (b) change of trim
- (c) trim
- (d) final trim

If choice b is selected set score to 1.

256. (3.6.13.6-2) For a vessel with a block coefficient of 1, the addition of weight at the center of flotation will _____.

- (a) increase the forward draft and decrease the after draft
- (b) decrease the forward draft and increase the after draft
- (c) have no effect on the stability
- (d) have no effect on the trim

If choice d is selected set score to 1.

257. (3.6.13.6-1) The difference between the starboard and port drafts caused by a transverse shift in weight is called _____.

- (a) trim
- (b) squat
- (c) flotation
- (d) list

If choice d is selected set score to 1.

258. (3.6.13.6-3) The difference between the starboard and port drafts due to wind or seas is called _____.

- (a) heel
- (b) trim
- (c) list
- (d) flotation

If choice a is selected set score to 1.

259. (3.6.13.6-7) As an engineer, you should be familiar with the conditions that will cause a vessel to transversely incline, list, or trim. Which of the following conditions causes a vessel to trim?

- (a) Off center weight.
- (b) Fore and aft shift of G.
- (c) Combination of off center weight and a negative GM.
- (d) Negative GM.

If choice b is selected set score to 1.

260. (3.6.13.6-8) While serving as Chief Engineer on a partially loaded container ship the vessel is involved in a collision. An empty starboard side wing tank becomes open to the sea and the ship takes a starboard list. After investigating the damage it is found that no other adjoining tanks are open to the sea. What action should be recommended to ensure the ship maintains an even keel position?

- (a) Ballast a starboard wing while checking the free surface effect.
- (b) Ballast a port wing and check the free surface effect for both damaged and intact tanks.
- (c) Discharge ballast from a port wing while checking the free surface effect.
- (d) Discharge ballast from a center line double bottom tank to increase the vessels GM and give her more stability.

If choice b is selected set score to 1.

261. (3.6.13.6-9) As 1st A/E on a large container vessel you should be familiar with the vessel's stability and the concepts of same. Regarding trimming of a vessel, and the location of the LCG, LCB and LCF, in which direction, and about which point, will the vessel trim based upon their relative locations? (See Illustration) Illustration RP014

- (a) Trim by the stern about the LCF.
- (b) Trim by the head about the LCB.
- (c) Trim by the head about the LCF.
- (d) Trim by the stern about the LCG.

If choice c is selected set score to 1.

262. (3.6.13.7-3) Reducing the free surfaces within a vessel, reduces the _____.

- (a) waterplane area
- (b) uncorrected height of the center of gravity
- (c) natural roll period
- (d) metacentric height

If choice c is selected set score to 1.

263. (3.6.13.7-2) A vessel's stability is greatly reduced by liquid free surface. Which of the listed conditions would develop the greatest adverse effect?

- ○ (a) Tanks which have been pressed up to full capacity.
- ○ (b) Tanks which are 95% full.
- • (c) Tanks which are 40% full.
- ○ (d) Tanks which have been completely emptied.

If choice c is selected set score to 1.

264. (3.6.13.7-1) Adverse effects due to free surface will result when _____.

- ○ (a) the vessel's draft is decreased exposing more surface area to the wind and current
- ○ (b) the vessel's draft is increased, thus increasing the vessel's wetted surface area
- • (c) a portion of liquid is removed from a full tank
- ○ (d) the vessel is trimmed by the stern

If choice c is selected set score to 1.

265. (3.6.13.7-4) Your vessel has been damaged in a grounding and one compartment has partially flooded. As a result, you have lost buoyancy. If transverse stability in the flooded condition is poor or negative, every effort should be made to reduce the free surface and to lower the center of gravity. Which of the following should you ensure is maintained?

- ○ (a) Ballast is maintained in the pre-grounding state.
- ○ (b) A GM that is at least neutral - G moved down to be at M.
- • (c) As much reserve buoyancy as possible.
- ○ (d) A no list condition.

If choice c is selected set score to 1.

266. (3.6.13.8-4) A vessel which is subjected to 'sagging' _____.

- ○ (a) is said to be under a form of transverse bending
- ○ (b) is supported on a wave whose crest is amidships
- • (c) has its bottom plating under tensile stress
- ○ (d) has its main deck under tensile stress

If choice c is selected set score to 1.

267. (3.6.13.8-3) A ballast tank is one-third full when additional ballast is added until it is two-thirds full. The increased amount of liquid in the tank will have the greatest influence on the _____.

- ○ (a) free surface effect
- ○ (b) virtual rise in the center of gravity
- ○ (c) value of the moment to trim 1 inch (MT1)
- • (d) transverse stability

If choice d is selected set score to 1.

268. (3.6.13.8-2) You can generally improve the vessel's stability in a hazardous situation by _____.

- ○ (a) pumping double bottoms to the forepeak
- ○ (b) transferring ballast athwartships
- • (c) ballasting appropriate port or starboard deep tanks
- ○ (d) deballasting double bottoms

If choice c is selected set score to 1.

269. (3.6.13.8-1) The factor contributing to the greatest effect on the ship's period of roll is the _____.

- ○ (a) moment to trim 1 inch (MT1)
- ○ (b) virtual rise in the center of gravity
- ○ (c) Vertical position of KB
- • (d) vertical weight distribution

If choice d is selected set score to 1.

270. (3.6.13.8-5) The 2nd assistant engineer has just finished fueling operations. After entering the fuel data into the loading computer you notice a greater than allowable at-sea bending stress. After the chief mate checks the voyage cargo data the vessel still has an excessive at-sea hogging bending stress. As Chief Engineer and after consulting with the Chief Mate, what should your instructions be to reduce the bending moment when ballasting the vessel?

- • (a) Add ballast to a mid ships tank.
- ○ (b) Add ballast to the fore peak tank.
- ○ (c) Add ballast to the aft peak tank.
- ○ (d) Remove ballast from a mid ships tank.

If choice a is selected set score to 1.

271. (3.6.13.8-6) Following cargo loading operations, your vessel is experiencing an excessive at-sea hogging bending stress as shown in the illustration. What should you do to reduce the bending moment? See Illustration SF-0047

- ○ (a) Remove ballast from a mid ships tank.
- ○ (b) Add ballast to the fore peak tank.
- • (c) Add ballast to a mid ships tank.
- ○ (d) Add ballast to the aft peak tank.

If choice c is selected set score to 1.

272. (3.6.13.8-7) Following cargo loading operations, your vessel is experiencing an excessive at-sea sagging bending stress as shown in the illustration. What should you do to reduce the bending moment? Illustration SF-0047

- ○ (a) Remove ballast from a mid ships tank.
- • (b) Add ballast to the fore peak and aft peak tanks.
- ○ (c) Remove ballast to the aft peak tank.
- ○ (d) Add ballast to a mid ships tank.

If choice b is selected set score to 1.

273. (3.6.13.9-3) The horizontal port, or starboard movement of a vessel is called _____.

- ○ (a) heave
- • (b) sway
- ○ (c) surge
- ○ (d) yaw

If choice b is selected set score to 1.

274. (3.6.13.9-1) Pitching is the rising and falling motion of the bow of a ship oscillating about which axis?

- ○ (a) Longitudinal
- ○ (b) Centerline
- ○ (c) Vertical
- • (d) Transverse

If choice d is selected set score to 1.

275. (3.6.13.9-4) The 3rd engineer on watch reports than the ship has an erratic rolling behavior and it does not appear to stabilize at an even keel position. As Chief Engineer, after consultation with the Chief Mate, what instruction would you give him?

- • (a) Add ballast to a center line double bottom tank.
- ○ (b) Discharge dirty ballast from a center line double bottom tank.
- ○ (c) Discharge water from the fore peak tank.
- ○ (d) Add ballast to wing tank to the side of the ship with an angle of list.

If choice a is selected set score to 1.

276. (3.6.13.9-6) The motion of a vessel impacts its stability. Which of these motions shown in the illustration affects the governing "motion ahead and astern" stability? Illustration SF-0048

- ○ (a) Heave
- ○ (b) Pitch
- ○ (c) Yaw
- • (d) Surge

If choice d is selected set score to 1.

277. (3.6.13.9-8) The motion of a vessel impacts its stability. Which of these motions shown in the illustration affects the governing "longitudinal" stability? Illustration SF-0048

- ○ (a) Yaw
- • (b) Pitch
- ○ (c) Heave
- ○ (d) Surge

If choice b is selected set score to 1.

278. (3.6.14.1-5) The device used for preventing the passage of flames into enclosed spaces is called a _____.

- ○ (a) flame relief valve
- ○ (b) flame stopper
- ○ (c) safety valve
- • (d) flame arrester

If choice d is selected set score to 1.

279. (3.6.14.1-1) Coast Guard Regulations (46 CFR), require electric hand lamps, approved for use in fuel tanks, to be battery powered and _____.

- ○ (a) moisture proof
- ○ (b) flame resistant
- ○ (c) corrosion resistant
- • (d) explosion proof

If choice d is selected set score to 1.

280. (3.6.14.1-3) Coast Guard Regulations (46 CFR) require that lifejackets shall be _____.

- ○ (a) readily accessible to persons in the engine room
- ○ (b) provided for each person onboard
- ○ (c) provided for all personnel on watch
- • (d) all of the above

If choice d is selected set score to 1.

281. (3.6.14.1-4) What is the minimum period of time that the air supply for a self-contained breathing apparatus is required to last?

- (a) 30 minutes
- (b) 45 minutes
- (c) 10 minutes
- (d) 15 minutes

If choice a is selected set score to 1.

282. (3.6.14.1-2) According to Coast Guard Regulations (46 CFR), the fuel tanks of motor-propelled lifeboats shall be _____.

- (a) constructed so as to be completely spill proof
- (b) emptied and the fuel changed at least once each year
- (c) emptied and gas freed when the ship is dry-docked
- (d) hydrostatically tested at each inspection for certification

If choice b is selected set score to 1.

283. (3.6.14.2-1) According to 46 CFR part 95, which of the listed fire extinguishers would be considered hand portable/semi portable and capable of combating a class "B" fire?

- (a) 35 pounds of carbon dioxide
- (b) 20 pounds of dry chemical
- (c) 2.5 gallons of foam
- (d) All of the above

If choice d is selected set score to 1.

284. (3.6.14.2-3) According to Coast Guard Regulations (46 CFR), portable and semi-portable fire extinguishers are classified by a letter and numeric designator. The letter designation indicates _____.

- (a) the type of fire the unit could be expected to extinguish
- (b) the type of extinguishing agent
- (c) the size of the extinguisher
- (d) whether this type of extinguisher is to be used on deck or in machinery spaces

If choice a is selected set score to 1.

285. (3.6.14.2-5) If the empty weight of a B-III semi-portable CO2 fire extinguisher is 35 lbs (15.9 kg), what is its full charged weight?

- (a) 55 lbs (24.9 kg)
- (b) 47 lbs (21.3 kg)
- (c) 70 lbs (31.7 kg)
- (d) 50 lbs (22.7 kg)

If choice c is selected set score to 1.

286. (3.6.14.2-14) Fire doors are released by a/an _____.

- (a) method that automatically releases the door in the event of a disruption of control system power
- (b) spring-loaded catch that automatically lifts to release the door in the event of the presence of a fire
- (c) pneumatic heat sensor
- (d) hydraulic directional valve that automatically releases the door in the event of a disruption to the control power system

If choice a is selected set score to 1.

287. (3.6.14.2-13) According to Coast Guard Regulations (46 CFR), which of the firefighting devices listed is not permitted for use in the engine room?

- (a) Semi-portable CO2 fire extinguishers
- (b) All high velocity fog applicators
- (c) All smooth bore firefighting nozzles
- (d) Any rubber lined hose

If choice c is selected set score to 1.

288. (3.6.14.2-8) The discharge side of every fire pump must be provided with a _____.

- (a) strainer
- (b) pressure gage
- (c) check valve
- (d) gate valve

If choice b is selected set score to 1.

289. (3.6.14.2-16) A fireman's outfit carried onboard cargo vessels, must have a _____.

- (a) canister-type gas mask
- (b) fresh-air breathing apparatus
- (c) self-contained breathing apparatus
- (d) combustible gas indicator

If choice c is selected set score to 1.

290. (3.6.14.2-10) A fire main system must have enough fire hydrants for each accessible space to be reached with _____.

- (a) a water spray or solid stream
- (b) at least 25 psi delivered pressure
- (c) at least two spray patterns of water
- (d) a low velocity spray applicator

If choice c is selected set score to 1.

291. (3.6.14.2-9) Fire main shore connections on a 1,000 gross ton cargo vessel are required by Coast Guard Regulations (46 CFR) to be provided with _____.

- (a) suitable adapters to mate shore fire line couplings
- (b) connections for 2 inch fire hose only
- (c) at least two shore connections on each side of the vessel
- (d) exterior "Y" connections for 1 1/2 inch fire hose only

If choice a is selected set score to 1.

292. (3.6.14.3.1-5) According to 46 CFR Part 95, which of the following statements is FALSE concerning the regulations pertaining to the carbon dioxide cylinder room for a CO2 fixed fire extinguishing system?

- (a) The ambient temperature of the room should never be allowed to exceed 130 degrees Fahrenheit.
- (b) The door must be kept unlocked.
- (c) The compartment must be properly ventilated.
- (d) The compartment shall be clearly identified and marked.

If choice b is selected set score to 1.

293. (3.6.14.3.1-6) The carbon dioxide cylinders of a fixed fire extinguishing system may be located inside the protected space if the quantity of CO2 required to protect that space is not more than _____.

- (a) 400 pounds
- (b) 600 pounds
- (c) 300 pounds
- (d) 500 pounds

If choice c is selected set score to 1.

294. (3.6.14.3.1-4) During the annual servicing of your ship's fixed CO2 system, you receive the report shown in the illustration. Which CO2 cylinders require recharging? SF-0014

- (a) 109
- (b) 103 and 108
- (c) 105
- (d) All of the above

If choice b is selected set score to 1.

295. (3.6.14.3.1-1) When a cylinder is used to store CO2 in a fixed firefighting system and is retested in accordance with regulations, all flexible connections between cylinders and distribution piping must be renewed or tested at _____.

- (a) 1000 psi
- (b) 1500 psi
- (c) 2750 psi
- (d) 300 psi

If choice a is selected set score to 1.

296. (3.6.14.3.1-2) According to Coast Guard Regulations (46 CFR), which of the following statements is true concerning fixed carbon dioxide fire extinguishing systems?

- (a) The cylinders which are fitted with flexible or bent siphon tubes may be inclined not more than 30° from the vertical.
- (b) All cylinders used for storing carbon dioxide shall be fabricated, tested, and marked in accordance with the applicable section of the American Welding Society code.
- (c) The space containing the cylinders shall be properly ventilated and designed to preclude an ambient temperature in excess of 100°F (37.78°C)
- (d) The cylinders may be located within the space protected provided the system consists of not more than 300 pounds (136.1 kg) of carbon dioxide.

If choice d is selected set score to 1.

297. (3.6.14.3.1-3) Carbon dioxide cylinders must be recharged when the cylinder charge weight is less than what percent of the stamped full weight charge?

- (a) 85%
- (b) 95%
- (c) 80%
- (d) 90%

If choice d is selected set score to 1.

298. (3.6.14.3.2-3) Coast Guard Regulations (46 CFR), require a fixed foam extinguishing system on cargo and miscellaneous vessels to meet which of the following requirements?

- (a) The deck foam system must be completely independent of the fixed foam system.
- (b) The foam producing chemicals must be discharged and recharged every year at annual inspection.
- (c) The supply of foam producing materials must be sufficient to operate the equipment for at least 3 minutes for spaces other than tanks.
- (d) The foam producing chemicals must be discharged and recharged every 2 years at the annual inspection.

If choice c is selected set score to 1.

299. (3.6.14.3.2-2)According to 46 CFR's, a fixed foam system aboard a tank vessel constructed in 1968, must be designed to supply foam for a minimum of _____.

- (a) 15 minutes
- (b) 7 minutes
- (c) 3 minutes
- (d) 12 minutes

If choice c is selected set score to 1.

300. (3.6.14.3.2-1) When the machinery spaces on a tank vessel are protected by a fixed foam extinguishing system, what additional protection is required by Coast Guard Regulations (46 CFR) outside of the machinery space entrance?

- (a) Two fire hydrants with hose, nozzle and applicator
- (b) Ten cubic feet of sand of with scoop
- (c) One semi-portable CO2 extinguisher
- (d) One portable foam extinguisher

If choice a is selected set score to 1.

301. (3.6.14.3.3-2) If a fixed fire extinguishing system is installed on any vessel, it must be of a type approved by the _____.

- (a) American Bureau of Shipping
- (b) Marine Fire Protection Guild
- (c) U.S. Coast Guard
- (d) National Fire Protection Association

If choice c is selected set score to 1.

302. (3.6.14.3.3-1) When fire detecting systems, fire extinguishing systems, and associated equipment are not required by the Coast Guard but are installed on a cargo vessel at the option of the vessel's owner, they _____.

- (a) need only to be Coast Guard inspected and/or tested after their initial installation
- (b) must be removed from the vessel as the only systems allowed and approved are those listed on the Coast Guard Certificate of Inspection
- (c) must also be inspected and/or tested in accordance with Coast Guard Regulations at each Inspection for Certification
- (d) are exempt from all tests and/or inspections as normally required by a Coast Guard inspector if maintained in a suitable working condition and used only as a back up

If choice c is selected set score to 1.

303. (3.6.14.3.4-1) Coast Guard Regulations (46 CFR) state that where reasonable and practicable, the steam pressure in a steam smothering system should be at least _____.

- (a) 100 psi
- (b) 150 psi
- (c) 125 psi
- (d) equal to one-half boiler working pressure

If choice a is selected set score to 1.

304. (3.6.14.4.1-11) The Federal Pollution Prevention Regulations (33 CFR) that apply to ships are enforced by the _____.

- (a) U.S. Coast Guard
- (b) Port Authority
- (c) Corps of Engineers
- (d) State Pollution Board

If choice a is selected set score to 1.

305. (3.6.14.4.1-10) According to Pollution Prevention Regulations (33 CFR), the "Discharge of Oil Prohibited" placard is required on all _____.

- (a) U.S. Vessels 26 feet or more in length
- (b) U.S. vessels less than 26 feet in length
- (c) foreign vessels not in U.S. navigable waters
- (d) Foreign vessels when engaged in noncommercial service

If choice a is selected set score to 1.

306. (3.6.14.4.1-7) If a vessel moored at a U.S. terminal does not comply with Coast Guard Pollution Prevention Regulations (33 CFR), it may be detained by the _____.

- (a) state pollution board
- (b) Inspector General
- (c) local port authority
- (d) Captain of the Port

If choice d is selected set score to 1.

307. (3.6.14.4.1-6) Where are "prohibited oil spaces" specified in the Pollution Prevention Regulations (33 CFR)?

- (a) Part 155
- (b) Part 151
- (c) Part 156
- (d) Part 154

If choice a is selected set score to 1.

308. (3.6.14.4.1-5) The term "oil", as used in the Pollution Prevention Regulations (33 CFR), means _____.

- (a) crude oil only
- (b) fuel oil only
- (c) liquefied petroleum gas
- (d) petroleum oil of any kind

If choice d is selected set score to 1.

309. (3.6.14.4.1-3) The term "discharge", as it applies to the pollution regulations, means _____.

- (a) spilling
- (b) leaking
- (c) dumping
- (d) all of the above

If choice d is selected set score to 1.

310. (3.6.14.4.2-2) According to Coast Guard Regulations (CFR 33), all ships are required to prepare, submit, and maintain a(an) _____.

- (a) shipboard oil pollution emergency plan
- (b) synthetic plastic discharge plan
- (c) vapor recovery procedures plan
- (d) oil discharge plan

If choice a is selected set score to 1.

311. (3.6.14.4.2-1) According to 33 CFR's, the approval period for a shipboard oil pollution emergency plan expires after _____.

- (a) two years
- (b) one year
- (c) four years
- (d) five years

If choice d is selected set score to 1.

312. (3.6.14.4.3-3) A new ocean going ship of 2000 gross tons having an inoperative oily water separator may dispose of its bilge slops by _____.

- (a) holding its slops onboard until they can be discharged to a shore side reception facility
- (b) holding its slops onboard until they can be pumped into the city sewer system
- (c) circulating them through the lube oil purifier to remove water and debris
- (d) pumping them into a settling tank for separation before pumping the oily water residue overboard

If choice a is selected set score to 1.

313. (3.6.14.4.3-1) On a newly constructed oceangoing vessel of 10,000 gross tons, equipped with an approved 100 ppm oily water separator, and bilge monitor, the bilge monitor continuous record must be _____.

- (a) initialed after each engineering watch by the watch engineer
- (b) detached monthly for enclosure in the Oil Record Book
- (c) maintained onboard for not less than 3 years
- (d) kept readily available for 1 year only

If choice c is selected set score to 1.

314. (3.6.14.4.3-2) Bilges may be pumped _____.

- (a) on the outgoing tide
- (b) overboard after dark
- (c) overboard through an oily water separator
- (d) anytime in an emergency, i.e. main engine lube oil failure

If choice c is selected set score to 1.

315. (3.6.14.4.3-4) On U.S. inspected ships, oily water separating equipment, bilge alarms, and bilge monitors must be approved under _____.

- (a) 33 CFR 151
- (b) 46 CFR 162
- (c) 18 CFR 201
- (d) 46 CFR 41

If choice b is selected set score to 1.

316. (3.6.14.4.4-1) Which of the following operations aboard a tanker must be recorded in the Oil Record Book on a tank-to-tank basis according to Coast Guard Regulations?

- (a) The discharge overboard in port or at sea of any bilge water accumulated in machinery spaces.
- (b) Any internal transfer of oil cargo during a voyage.
- (c) The loading or unloading of any or all oil cargo.
- (d) All of the above.

If choice d is selected set score to 1.

317. (3.6.14.4.5-5) A tank vessel with an oil cargo capacity of 5000 barrels is required by regulations to have a fixed container, or enclosed deck area under or around each oil loading manifold and each oil transfer connection point. The capacity of these containment areas is based upon _____.

- (a) inside transfer hose diameter or loading arm nominal pipe size diameter
- (b) number of cargo oil tank vents, overflows and fill pipe connections
- (c) cargo oil service pressure
- (d) all of the above

If choice a is selected set score to 1.

318. (3.6.14.4.5-10) In accordance with Coast Guard Regulations (33 CFR), each pressure gage used in fuel transfer operations must be calibrated to indicate pressure within what percent of the actual pressure?

- ○ (a) 3%
- • (b) 10%
- ○ (c) 7%
- ○ (d) 5%

If choice b is selected set score to 1.

319. (3.6.14.4.5-9) An ocean going ship of 6000 gross tons or above must be fitted with a standard discharge shore connection with dimensions outlined in Pollution Prevention Regulations (33 CFR) or be substituted with a _____.

- ○ (a) clip-on flange suitable for service pressure of 4 kg/cm2
- ○ (b) portable connection using a four bolt pattern
- • (c) portable adapter that meets the same specification outlined in 33 CFR, Subchapter "O"
- ○ (d) suitable discharge shore connection

If choice c is selected set score to 1.

320. (3.6.14.4.5-13) According to Pollution Prevention Regulations (33 CFR), you are required to test cargo discharge piping every _____.

- ○ (a) 24 months
- ○ (b) 6 months
- • (c) 12 months
- ○ (d) 18 months

If choice c is selected set score to 1.

321. (3.6.14.4.5-2) Pollution Prevention Regulations (33 CFR Part 156), state that no person may transfer oil to or from a vessel unless _____.

- ○ (a) an oil containment boom is available for immediate use
- • (b) all parts of the transfer system have been properly lined up
- ○ (c) oil residue has been drained from all hoses
- ○ (d) a representative sample has been taken from the oil being received

If choice b is selected set score to 1.

322. (3.6.14.4.5-11) Which of the following statements is true concerning oil transfer connections?

- ○ (a) Any permanently connected flange coupling must have a bolt in each hole.
- ○ (b) Approved quick-connect couplings may be used.
- ○ (c) When a temporary connection utilizes an American National Standard Institute (ANSI) standard flange, a bolt in every other hole is acceptable if at least four bolts are used.
- • (d) All of the above.

If choice d is selected set score to 1.

(3.6.14.4.5-8) The Pollution Prevention Regulations (33 CFR) state that a ship's oily bilge slops may be pumped in port only if the _____.

- (a) local port authority gives permission
- (b) engineer on watch has signed the declaration of inspection
- (c) discharge is led to a reception facility
- (d) local port authority has completed the required pollution inspection

If choice c is selected set score to 1.

323. (3.6.14.4.6-4) According to the Pollution Prevention Regulations (33 CFR), who makes the final decision of when oil transfer may begin?

- (a) The designated person-in-charge
- (b) The senior deck officer present
- (c) The captain of the port
- (d) Any local Coast Guard representative

If choice a is selected set score to 1.

324. (3.6.14.4.6-5) According to the Pollution Prevention Regulations (33 CFR), no person may transfer oil to or from a vessel unless each person in charge has signed the _____.

- (a) valve inspection record
- (b) declaration of inspection
- (c) oil record book
- (d) certificate of inspection

If choice b is selected set score to 1.

325. (3.6.14.4.6-1) No person may serve as the person-in-charge of oil transfer operations on more than one vessel at a time _____.

- (a) under any circumstances
- (b) unless radio communication is set up between the vessels
- (c) unless the vessels are moored clear of all docks
- (d) unless authorized by the Captain of the Port

If choice d is selected set score to 1.

326. (3.6.14.4.6-6) Pollution Prevention Regulations (33 CFR) specify that the person-in-charge of bunkering is responsible for the _____.

- (a) quality of fuel received
- (b) vessel draft
- (c) communications with terminal operator
- (d) quantity of fuel received

If choice c is selected set score to 1.

327. (3.6.14.4.6-3) The Coast Guard Pollution Prevention Regulations (33 CFR) require a meeting before starting any oil transfer operation. That meeting must be between the _____.

- (a) master of the vessel and the terminal superintendent
- (b) terminal supervisor, Master of the vessel and the Coast Guard
- (c) person-in-charge of the oil transfer operations on the vessel and the person-in-charge of the oil transfer operations at the facility
- (d) master and chief engineer of the vessel and the terminal supervisor

If choice c is selected set score to 1.

328. (3.6.14.4.6-2) According to the Pollution Prevention Regulations (33 CFR), who is to make the final decision of when oil transfer may begin?

- (a) Any local Coast Guard representative
- (b) Captain of the Port officer
- (c) The senior deck officer present
- (d) Designated persons-in-charge of vessel and facility

If choice d is selected set score to 1.

329. (3.6.14.4.7-3) Ocean vessel Ballast Water Management Regulations can be found in _____.

- (a) 46 CFR Part 35
- (b) 33 CFR Part 110
- (c) 33 CFR Part 151
- (d) 46 CFR Part 56

If choice c is selected set score to 1.

330. (3.6.14.4.7-2) To be in compliance with U.S. Federal Ballast Water Management regulations, which of the following procedures may be followed by an ocean vessel entering U.S. waters returning from an international voyage?

- (a) Ballast water may only be discharged overboard through an approved oily water separator.
- (b) Prior to entering U.S. waters, a vessel may use any Coast Guard approved alternative environmentally sound method of BWM.
- (c) Prior to discharging ballast water in U.S. waters, the vessel must perform a complete ballast water exchange in an area no less than 100 nautical miles from any shoreline.
- (d) Ballast water may only be discharged overboard if the vessel is underway.

If choice b is selected set score to 1.

331. (3.6.14.4.8-1) Which CFR regulation identifies the placard to be posted on the vessel describing the proper disposal of garbage?

- (a) 33 CFR Part 157.37
- (b) 33 CFR Part 151.59
- (c) 33 CFR Part 159.51
- (d) 33 CFR Part 157.100

If choice b is selected set score to 1.

332. (3.6.14.4.8-4) According to 33 CFR, records of garbage disposal are required to be maintained _____.

- (a) for a minimum of two years
- (b) until the end of each voyage
- (c) for a minimum of one year
- (d) until each quadrennial Coast Guard inspection

If choice a is selected set score to 1.

333. (3.6.14.4.8-6) According to Code of Federal Regulations (33 Part 151), which of the following statements is accurate concerning the discharge of garbage?

- (a) The discharge of dunnage, lining, and packing materials that do not float is prohibited within 25 nautical miles of the nearest land.
- (b) The discharge of plastic or garbage mixed with plastic into any waters is permitted.
- (c) The discharge of all garbage is prohibited in the navigable waters of the United States and in all other waters within three nautical miles of the nearest land.
- (d) All of the above are correct.

If choice c is selected set score to 1.

334. (3.6.14.4.8-7) According to Code of Federal Regulations (33 CFR 151), who is responsible for insuring that a ship is not operated unless a waste management plan is utilized?

- (a) U.S. Coast Guard
- (b) Vessel's Master
- (c) Vessel owner
- (d) Vessel operating company

If choice b is selected set score to 1.

335. (3.6.14.4.9-1) Among other restrictions, an oil tanker may not discharge an oily mixture into the sea from a cargo tank, slop tank, or cargo pump room bilge unless the vessel is _____.

- (a) discharging at an instantaneous rate of oil content not exceeding 30 liters per nautical mile
- (b) is within "Special Areas" defined in Regulation 1 (10) of Annex I to MARPOL 73/78
- (c) at anchor or stopped
- (d) more than 12 nautical miles from the nearest land

If choice a is selected set score to 1.

336. (3.6.14.4.9-4) If an emergency pump control is used as the emergency shutdown on a tank vessel, it must stop the flow of oil through _____.

- (a) the main deck manifold
- (b) the pump
- (c) the facility
- (d) a means that is not dependant on electrical power

If choice b is selected set score to 1.

337. (3.6.14.4.9-3) The emergency shutdown requirements of Pollution Prevention Regulations (33 CFR Part 155) apply to _____.

- (a) cargo transfer systems
- (b) condensate pumps
- (c) induced draft fans
- (d) air compressors

If choice a is selected set score to 1.

338. (3.6.14.4.9-2) For all loading operations, the terminal must supply the vessel with a means in which the vessel's designated person-in-charge may stop the flow of oil to the vessel, insuring immediate shutdown in the event of a hose rupture, tank overflow, etc. This means of control may be activated _____.

- (a) pneumatically or mechanically
- (b) electrically
- (c) via a communications device used for no other purpose
- (d) All of the above.

If choice d is selected set score to 1.

339. (3.6.14.4.9-5) Where in the Code of Federal Regulations will you find information about the compatibility of cargoes?

- (a) Title 33 Subchapter O
- (b) Title 46 Subchapter O
- (c) Title 46 Subchapter N
- (d) Title 46 Subchapter D

If choice b is selected set score to 1.

340. (3.6.14.5.1-1) According to 46 CFR, Part 30, a Grade "E" petroleum product is _____.

- (a) a combustible liquid
- (b) light fuel oil
- (c) a flammable liquid
- (d) kerosene

If choice a is selected set score to 1.

341. (3.6.14.5.2-1) According to Coast Guard Regulations (46 CFR), no vessel can come alongside or remain alongside a tank vessel while it is loading A, B, or C grade cargo without having the permission of the _____.

- (a) USCG captain of the port
- (b) tank ship owner
- (c) terminal manager
- (d) officer-in-charge of the vessel which is loading

If choice d is selected set score to 1.

342. (3.6.14.6-1) Your passenger vessel has departed port with 1,235 passengers on board for a 10 day voyage. What should be your ship's standard operating procedures regarding watertight hatches and doors?

- (a) All watertight doors in subdivision bulkheads shall be kept closed during navigation except when necessarily opened for working of the vessel, and in such cases they shall always be ready to be immediately closed.
- (b) All watertight doors in subdivision bulkheads shall be kept open during navigation to facilitate crew movement and in all cases they shall always be ready to be immediately closed.
- (c) All watertight doors in subdivision bulkheads shall be kept closed when the vessel is anchored except when necessarily opened for working of the vessel, and in such cases they shall always be ready to be immediately closed.
- (d) All watertight doors in subdivision bulkheads shall be kept open during normal operation, except during adverse weather when they shall be closed.

If choice a is selected set score to 1.

343. (3.6.14.6-2) Your passenger vessel has departed port with 1,235 passengers on board for a 10 day voyage. What should be your ship's standard operating procedures regarding the inspection of watertight hatches and doors?

- (a) All watertight doors in subdivision bulkheads that may be opened at sea shall be periodically inspected at least once in each day while the vessel is navigated to be assured that they are in proper operating condition. When the voyage exceeds one week in duration, these doors shall be operated before the vessel leaves port. All such doors shall be operated daily.
- (b) All watertight doors in subdivision bulkheads that may be opened at sea shall be periodically inspected at least once in each month while the vessel is navigated to be assured that they are in proper operating condition. When the voyage exceeds two week in duration, these doors shall be operated before the vessel leaves port. All such doors shall be operated weekly.
- (c) All watertight doors in subdivision bulkheads that may be opened at sea shall be overhauled at least once in each month to be assured that they are in proper operating condition. When the voyage exceeds one week in duration, these doors shall be operated before the vessel leaves port. All such doors shall be operated daily.
- (d) All watertight doors in subdivision bulkheads that may be opened at sea shall be periodically inspected at least once in each week while the vessel is navigated to be assured that they are in proper operating condition. When the voyage exceeds one week in duration, these doors shall be operated before the vessel leaves port. All such doors shall be operated daily.

If choice d is selected set score to 1.

344. (3.6.14.6-3) Your passenger vessel has departed port with 1,235 passengers on board for a 10 day voyage. What actions must be taken to verify that your vessel was in compliance with stability requirements?

- (a) The master shall determine that the vessel complies with all applicable stability requirements in the vessel's trim and stability book, stability letter, Certificate of Inspection, and Load Line Certificate, as the case may be, and then enter an attestation statement of the verification in the ship's stability book. The vessel may not depart until it is in compliance with these requirements.
- (b) Ensure that the vessel owners has determined that the vessel complies with all applicable stability requirements in the vessel's trim and stability book, stability letter, Certificate of Inspection, and Load Line Certificate, as the case may be, and then enter an attestation statement of the verification in the log book. The vessel may not depart until it is in compliance with these requirements.
- (c) The master shall determine that the vessel complies with all applicable stability requirements in the vessel's trim and stability book, stability letter, Certificate of Inspection, and Load Line Certificate, as the case may be and send a message verifying the condition of the vessel to the vessel's owners. The vessel may not depart until it is in compliance with these requirements.
- (d) The master shall determine that the vessel complies with all applicable stability requirements in the vessel's trim and stability book, stability letter, Certificate of Inspection, and Load Line Certificate, as the case may be, and then enter an attestation statement of the verification in the log book. The vessel may not depart until it is in compliance with these requirements.

If choice d is selected set score to 1.

345. (3.6.10.1-2) The airborne concentrations of substances (such as hydrogen sulfide) under which nearly all workers may be repeatedly exposed without adverse effects are called _____.

- o (a) exposure limits
- o (b) concentration limits
- • (c) threshold limit values
- o (d) substance limit values

If choice c is selected set score to 1.

346. (3.6.10.1-1) If flammable vapors have penetrated a gas free space, which of the following actions would be the most hazardous to perform?

- • (a) Opening switches in the space to de-energize circuits.
- o (b) Closing switches adjacent to the space to operate vent fans.
- o (c) Leaving electrical circuits energized in the space.
- o (d) Securing all power to the space from a remote location.

If choice a is selected set score to 1.

347. (3.6.15.0-3) As Chief Engineer on a vessel of more than 1600 gross tons on an international voyage, you and the First Engineer are planning a welding job in the cargo hold. How would you ensure that all safety precautions are reviewed prior to starting this job?

- o (a) Have the First Engineer complete a Hot Work permit after completing the job.
- o (b) Have the First Engineer review the SOLAS manual prior to starting the job.
- o (c) Have the First Engineer verbally review fire safety with crew working on the job.
- • (d) Have the First Engineer complete a Hot Work permit prior to starting the job.

If choice d is selected set score to 1.

348. (3.6.15.3-2) As First Engineer, you are standing by the #3 deep fuel oil storage tank as a crew member is working inside the tank. Before entering the tank, the atmosphere was checked and determined safe for men to work. While standing by you notice that the crew member is not moving. After attempts to communicate with the downed mariner receive no response, what action would you take?

- o (a) Send another another crew member, without a SCBA on, into the tank to retrieve the unconscious crew member.
- o (b) Send two additional crew members, without a SCBA on, into the tank to retrieve the unconscious crew member.
- • (c) Have additional crew members don a SCBA to enter the tank, to aid in the removal of the unconscious crew member.
- o (d) Call the Captain and ask him how you should proceed.

If choice c is selected set score to 1.

349. (3.6.15.1-1) An oxygen indicator will detect _____.

- (a) the presence of harmful amounts of carbon monoxide
- (b) an oxygen deficiency in a space
- (c) concentrations of explosive gas
- (d) all of the above

If choice b is selected set score to 1.

350. (3.6.15.1-2) Which of the following statements is true regarding oxygen indicators?

- (a) The instrument is capable of providing an immediate accurate reading of any space with no delay.
- (b) A cotton filter placed in the end of the sampling tube prevents damaging the instrument when exposed to strongly acidic gases.
- (c) Prolonged exposure to gases such as CO2 may affect the accuracy of the indicator.
- (d) All of the above.

If choice c is selected set score to 1.

351. (3.6.15.2-1) Which of the following statement is true concerning the meter shown in the illustration? See Illustration SF-0003

- (a) As gas samples are drawn into the instrument they are burned within the case.
- (b) If there is any liquid in the tank being tested, the sampling tube should be submerged in it to obtain the most accurate reading.
- (c) If the meter moves to the extreme right side of the scale and stays there, the atmosphere is safe.
- (d) Meter readings are obtained instantaneously upon release of the squeeze bulb.

If choice a is selected set score to 1.

352. (3.6.15.2-2) When taking samples of a tank atmosphere with an explosimeter, you should _____.

- (a) avoid sampling in the vicinity of deep webs to prevent false readings
- (b) sample as much of the tank as possible, especially at the bottom
- (c) only sample around the deck longitudinals as gases are lighter than air
- (d) sample only near the ullage openings as all vapors accumulate there

If choice b is selected set score to 1.

353. (3.6.15.2-3) The instrument shown in the illustration has not been used for several weeks. Prior to its use for testing a compartment, you should _____. See Illustration SF-0003

- (a) check or renew the batteries
- (b) purge the meter
- (c) adjust the meter pointer to zero
- (d) all of the above

If choice d is selected set score to 1.